

CA20N
EA13

- H26

EA-87-02

Government
Publications



ENVIRONMENTAL ASSESSMENT BOARD

VOLUME:

63

DATE:

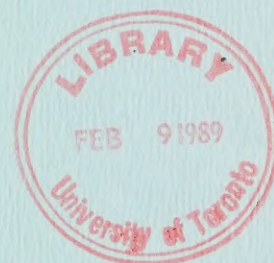
Monday, January 30th, 1989

BEFORE:

M.I. JEFFERY, Q.C., Chairman

E. MARTEL, Member

A. KOVEN, Member



FOR HEARING UPDATES CALL (TOLL-FREE): 1-800-387-8810

EARR
ASSOCIATES &
REPORTING INC.

(416) 482-3277

2300 Yonge St., Suite 709, Toronto, Canada M4P 1E4



Digitized by the Internet Archive
in 2023 with funding from
University of Toronto

<https://archive.org/details/31761116519844>

CA20N
EA13
- H26

EA-87-02

Government
Publications



ENVIRONMENTAL ASSESSMENT BOARD

VOLUME:

63

DATE:

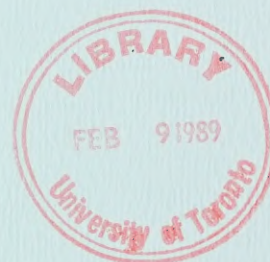
Monday, January 30th, 1989

BEFORE:

M.I. JEFFERY, Q.C., Chairman

E. MARTEL, Member

A. KOVEN, Member



FOR HEARING UPDATES CALL (TOLL-FREE): 1-800-387-8810

EARR
ASSOCIATES &
REPORTING INC.

(416) **482-3277**

2300 Yonge St.. Suite 709. Toronto. Canada M4P 1E4

HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental
Assessment for Timber Management on Crown
Lands in Ontario;

- and -

IN THE MATTER of an Order-in-Council
(O.C. 2449/87) authorizing the
Environmental Assessment Board to
administer a funding program, in
connection with the environmental
assessment hearing with respect to the
Timber Management Class
Environmental Assessment, and to
distribute funds to qualified
participants.

Hearing held at the Ramada Prince Arthur
Hotel, 17 North Cumberland St., Thunder
Bay, Ontario, on Monday, January 30th,
1989, commencing at 1:00 p.m.

VOLUME 63

BEFORE:

MR. MICHAEL I. JEFFERY, Q.C.	Chairman
MR. ELIE MARTEL	Member
MRS. ANNE KOVEN	Member

A P P E A R A N C E S

MR. V. FREIDIN, Q.C.)	MINISTRY OF NATURAL
MS. C. BLASTORAH)	RESOURCES
MS. K. MURPHY)	
MS. Y. HERSCHER)	
MR. B. CAMPBELL)	MINISTRY OF ENVIRONMENT
MS. J. SEABORN)	
MR. R. TUER, Q.C.)	ONTARIO FOREST INDUSTRY
MR. R. COSMAN)	ASSOCIATION and ONTARIO
MS. E. CRONK)	LUMBER MANUFACTURERS'
MR. P.R. CASSIDY)	ASSOCIATION
MR. J. WILLIAMS, Q.C.	ONTARIO FEDERATION OF
	ANGLERS & HUNTERS
MR. D. HUNTER	NISHNAWBE-ASKI NATION
	and WINDIGO TRIBAL COUNCIL
MR. J.F. CASTRILLI)	
MS. M. SWENARCHUK)	FORESTS FOR TOMORROW
MR. R. LINDGREN)	
MR. P. SANFORD)	KIMBERLY-CLARK OF CANADA
MS. L. NICHOLLS)	LIMITED and SPRUCE FALLS
MR. D. WOOD)	POWER & PAPER COMPANY
MR. D. MacDONALD	ONTARIO FEDERATION OF
	LABOUR
MR. R. COTTON	BOISE CASCADE OF CANADA
	LTD.
MR. Y. GERVAIS)	ONTARIO TRAPPERS
MR. R. BARNES)	ASSOCIATION
MR. R. EDWARDS)	NORTHERN ONTARIO TOURIST
MR. B. McKERCHER)	OUTFITTERS ASSOCIATION
MR. L. GREENSPOON)	NORTHWATCH
MS. B. LLOYD)	

APPEARANCES: (Cont'd)

MR. J.W. ERICKSON, Q.C.) MR. B. BABCOCK)	RED LAKE-EAR FALLS JOINT MUNICIPAL COMMITTEE
MR. D. SCOTT) MR. J.S. TAYLOR)	NORTHWESTERN ONTARIO ASSOCIATED CHAMBERS OF COMMERCE
MR. J.W. HARBELL) MR. S.M. MAKUCH)	GREAT LAKES FOREST
MR. J. EBBS	ONTARIO PROFESSIONAL FORESTERS ASSOCIATION
MR. D. KING	VENTURE TOURISM ASSOCIATION OF ONTARIO
MR. D. COLBORNE	GRAND COUNCIL TREATY #3
MR. R. REILLY	ONTARIO METIS & ABORIGINAL ASSOCIATION
MR. H. GRAHAM	CANADIAN INSTITUTE OF FORESTRY (CENTRAL ONTARIO SECTION)
MR. G.J. KINLIN	DEPARTMENT OF JUSTICE
MR. S.J. STEPINAC	MINISTRY OF NORTHERN DEVELOPMENT & MINES
MR. M. COATES	ONTARIO FORESTRY ASSOCIATION
MR. P. ODORIZZI	BEARDMORE-LAKE NIPIGON WATCHDOG SOCIETY
MR. R.L. AXFORD	CANADIAN ASSOCIATION OF SINGLE INDUSTRY TOWNS
MR. M.O. EDWARDS	FORT FRANCES CHAMBER OF COMMERCE
MR. P.D. McCUTCHEON	GEORGE NIXON

(iii)

APPEARANCES: (Cont'd)

MR. C. BRUNETTA

NORTHWESTERN ONTARIO
TOURISM ASSOCIATION

I N D E X O F P R O C E E D I N G S

<u>Witness:</u>	<u>Page No.</u>
<u>WILLIAM JOHN STRAIGHT,</u> <u>R. DAVID SCOTT,</u> <u>PETER J. McNAMEE, Sworn</u>	
Direct Examination by Mr. Freidin	10647
SCOPING SESSION.....	10756

I N D E X O F E X H I B I T S

<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
378	MNR's statement of evidence for Panel 8 entitled: Resource Management Decision-Making Limitations and Effects.	10643
379	Timber Management Guidelines for the Protection of Tourism Values.	10643
380	Background Report to Timber Management Guidelines Effects Monitoring Workshop, April 6th to 10th, 1987.	10643
381	Effects Monitoring for Resource Protection Guidelines in Ontario, ESSA Report to the Ministry of Natural Resources dated March, 1988.	10643
382	A Silvicultural Guide for the Spruce Working Group in Ontario, an MNR publication dated 1988.	10644
383A	Nishnawbe-Aski Nation Interrogatory Questions 1 and 4.	10644
383B	OFIA Interrogatory Questions 1 and 6.	10644
383C	MOE Interrogatory Question 1(a).	10644
384	Correction to the statement of evidence for Panel 5, Figure 3 on page 48.	10645
378A	Revised witness statement of Panel 8.	10756

1 ----Upon commencing at 1:05 p.m.

2 THE CHAIRMAN: Thank you. Be seated,
3 please.

4 Good afternoon, ladies and gentlemen,
5 welcome back to what I believe is day sixty-one of the
6 timber management hearing.

7 I want to thank counsel and participants
8 for consenting to having the Board and this hearing
9 participate in this educational project. As you are
10 probably aware, Lakehead and Waterloo are jointly
11 putting on an educational project, part of which
12 envisages taping part of this hearing for the next two
13 or three days. We have asked those in charge of the
14 filming to do their utmost not to disrupt in any way
15 any of the witnesses' presentation or that of counsel
16 or the Board for that matter.

17 But we do appreciate counsels'
18 cooperation because the Board feels strongly that its
19 process and the hearing process in general has a value
20 to be better understood by the public at large and
21 certainly our young people in universities that are
22 studying in this area, so we want to thank you for
23 that.

24 Before we proceed this afternoon, there
25 is just a couple of brief things I want to deal with.

1 Firstly with respect, Mr. Freidin, to the site visit
2 which took place towards the end of November, we were
3 wondering whether or not a synopsis or a resume of that
4 site visit might be provided at some point to the Board
5 which we could then exhibit as to where the Board went,
6 who was in attendance, and the places and locations and
7 activities that the Board viewed, much in the same form
8 as that produced by Mr. Kennedy after the first site
9 visit.

10 MR. FREIDIN: I will advise you about
11 that.

12 THE CHAIRMAN: Thank you. As you are
13 also aware, the scoping session for Panel 9 is going to
14 take place later today.

15 It is the Board's intention at this point
16 to proceed on with the evidence this afternoon until
17 five to 5:30, then break for a dinner break until
18 approximately seven o'clock and return here for the
19 scoping session. We don't anticipate, in view of the
20 material to be covered by Panel 9 that it should take
21 more than an hour this evening.

22 The next thing the Board wants to deal
23 with is to quickly read into the record exhibits which
24 are going to be filed in connection with this panel.
25 They are as follows, starting with Exhibit 378:

1 Ministry of Natural Resources statement
2 of evidence for Panel 8 entitled: Resource Management
3 Decision-Making Limitations of Effects.

4 ---EXHIBIT NO. 378: MNR's statement of evidence for
5 Panel 8 entitled: Resource
6 Management Decision-Making
7 Limitations and Effects.

8 THE CHAIRMAN: Exhibit 379: Timber
9 Management Guidelines for the Protection of Tourism
10 Values.

11 ---EXHIBIT NO. 379: Timber Management Guidelines for
12 the Protection of Tourism Values.

13 THE CHAIRMAN: Exhibit 380: Background
14 Report to Timber Management Guidelines Effects
15 Monitoring Workshop, April 6th to 10th, 1987.

16 ---EXHIBIT NO. 380: Background Report to Timber
17 Management Guidelines Effects
18 Monitoring Workshop, April 6th to
19 10th, 1987.

20 THE CHAIRMAN: Exhibit 381: Effects
21 Monitoring for Resource Protection Guidelines in
22 Ontario, ESSA Report to the Ministry of Natural
23 Resources dated March, 1988.

24 ---EXHIBIT NO. 381: Effects Monitoring for Resource
25 Protection Guidelines in Ontario,
ESSA Report to the Ministry of
Natural Resources dated March,
1988.

THE CHAIRMAN: Exhibit 382: A

1 Silvicultural Guide for the Spruce Working Group in
2 Ontario, an MNR publication dated 1988.

3 ---EXHIBIT NO. 382: A Silvicultural Guide for the
4 Spruce Working Group in Ontario,
an MNR publication dated 1988.

5 THE CHAIRMAN: And Exhibit 383 consists
6 of selected interrogatories and answers related to the
7 statement of evidence for Panel 8, and that is broken
8 down into sub A: Nishnawbe-Aski Nation Questions 1 and
9 4; B: Ontario Forest Industry's Association, Questions
10 1 and 6; and C: Ministry of the Environment Question
11 1(a).

12 ---EXHIBIT NO. 383A: Nishnawbe-Aski Nation
Interrogatory Questions 1 and 4.

13 ---EXHIBIT NO. 383B: OFIA Interrogatory Questions 1
14 and 6.

15 ---EXHIBIT NO. 383C: MOE Interrogatory Question 1(a).
16

17 THE CHAIRMAN: I think we have most of
18 those.

19 MS. BLASTORAH: Mr. Chairman, I think you
20 do have most of those. I have brought copies to be
21 marked as the official exhibit and I have already taken
22 the liberty of putting the exhibit numbers on them.

23 There is one additional exhibit which
24 unfortunately I neglected to mention to Mr. Mander. It
25 is a correction to the statement of evidence for Panel

1 5. We had undertaken to provide a replacement for the
2 Figure 3 on page 48 and we now have that available, so
3 I have copies for the parties here and I have a copy
4 for the exhibit and one for each of the Board members.

5 THE CHAIRMAN: Will that go in as a new
6 number?

7 MS. BLASTORAH: Yes. I spoke to Mr.
8 Mander just before the hearing and he indicated that
9 that would be Exhibit 384.

10 THE CHAIRMAN: Very well.

11 ---EXHIBIT NO. 384: Correction to the statement of
12 evidence for Panel 5, Figure 3 on
 page 48.

13 MS. BLASTORAH: As well, the copies of
14 Exhibit 383, the interrogatories, I believe the parties
15 will probably have them here. I wasn't sure whether
16 the Board would or not so I have taken the liberty of
17 photocopying them again for the Board.

18 There is a sample forest management
19 agreement which was attached to one of those exhibits.
20 It was still in the process of being copied when I came
21 over this morning, so I don't have copies of that
22 available yet, but I will make them available tomorrow.

23 THE CHAIRMAN: Thank you, Ms. Blastorah.

24 I take it there is no objections from
25 anyone to those being admitted under those numbers?

1 (No response)

2 Thank you.

3 MS. BLASTORAH: Mr. Chairman, I do have
4 extra copies for the Board of the Silvicultural Guide
5 for the Spruce Working Group and I have a limited
6 number of additional copies for any of the parties.

7 THE CHAIRMAN: Thank you.

8 Very well, Mr. Freidin, are you ready to
9 proceed with Panel 8?

10 MR. FREIDIN: Yes. I am just wondering
11 if I could ask you to repeat the breakdown of Exhibit
12 383 which were the interrogatories.

13 THE CHAIRMAN: All right. The way I had
14 it in the beginning was 383A were the Nishnawbe-Aski
15 Nation Questions 1 through 4.

16 MR. FREIDIN: 1 through...?

17 THE CHAIRMAN: 1 through 4?

18 MR. FREIDIN: No, just...

19 MR. MANDER: 1 and 4.

20 THE CHAIRMAN: Sorry, 1 and 4.

21 MR. FREIDIN: All right.

22 THE CHAIRMAN: And B was the Ontario
23 Forest Industry's Association Questions 1 and 6, and C
24 was the Ministry of the Environment's Question 1(a).

25 MR. FREIDIN: Okay.

1 THE CHAIRMAN: Do you want to swear the
2 witnesses?

3 MR. FREIDIN: Yes, I think so.
4 Gentlemen, if you could just go up to the front.

5 THE CHAIRMAN: Could you come up here,
6 please, and be sworn.

7 WILLIAM STRAIGHT,
8 DAVID SCOTT,
 PETER McNAMEE, Sworn

9 THE CHAIRMAN: How do you wish these
10 witnesses to be qualified, Mr. Freidin?

11 MR. FREIDIN: I would ask that Mr. Scott
12 be qualified as an expert, he's a forester with general
13 experience and who has held a number of positions
14 within the field organization of the Ministry, but
15 basically as a forester.

16 THE CHAIRMAN: Very well.

17 MR. FREIDIN: Mr. Straight is an expert
18 in resource management.

19 And in relation to Dr. McNamee, I will
20 tell you first what it is that I would like him to be
21 qualified in and then you may want me to ask him to
22 just give a brief explanation of the two things that I
23 am asking him to be qualified in.

24 The first as an expert in natural
25 resource modelling and, secondly, as an expert in

1 workshop facilitating. And seeing those are not
2 perhaps common areas that one asks that an expert be
3 qualified in, it might be appropriate if Dr. McNamee
4 could indicate firstly what a natural resource modeller
5 is.

6 DR. McNAMEE: Well, I define natural
7 resource modelling as modelling the effects of human
8 actions on natural resources, and I would define the
9 word modelling as prediction in time and space.

10 I would define workshop facilitation as
11 the job of leading groups of people with varying
12 technical perspectives and backgrounds towards
13 resolving a natural resource problem.

14 MR. FREIDIN: That was the description
15 that we intended to give, Mr. Chairman. I think the
16 curriculum vitae is fairly lengthy and supports the
17 request.

18 THE CHAIRMAN: Is there any objections to
19 any of the witnesses being qualified in those areas?

20 (No response)

21 Very well, they will be so qualified.
22 Thank you.

23 MR. FREIDIN: Mr. Chairman, before I
24 commence, I would like to give a very short
25 introduction and perhaps advise you that I am hopeful

1 that this panel's evidence-in-chief will be completed
2 this afternoon.

3 As you are aware, Mr. Chairman, the panel
4 is described as a panel dealing with resource
5 management decision-making limitation of effects and,
6 as I indicated at the scoping hearings in relation to
7 this particular matter, this panel will basically be
8 broken into two parts.

9 Mr. Straight and Mr. Scott are going to
10 be describing the parameters which define the
11 decision-making of the Ministry in relation to natural
12 resources and a lot of the information that is in the
13 witness statement was in fact covered, if not wholly,
14 at least in part by Panel No. 7 and we have no
15 intention of repeating that evidence. Mr. Straight
16 will be speaking to that matter and perhaps just making
17 passing reference to those areas dealt with in 7.

18 The panel, in particular again Mr.
19 Straight and Mr. Scott, will be focusing primarily on
20 those tools which are available to resource managers in
21 assisting them to make decisions in relation to
22 resource management.

23 Dr. McNamee, his evidence is related to
24 the evidence which will be given in Panel No. 16 which
25 deals with effectiveness monitoring. And, in fact, his

1 evidence today is going to be limited to describing a
2 series of workshops which took place over the last year
3 or two, which workshops produced a number of
4 recommendations regarding research and monitoring that
5 the Ministry of Natural Resources could undertake in
6 order to assess the effectiveness of the three
7 provincial guidelines which Mr. Straight will be
8 speaking to. Those are the guidelines in relation to
9 fish habitat, moose habitat and the protection of
10 tourism values.

11 As I indicated in the scoping session as
12 well, Mr. Chairman, I would just remind the parties of
13 the letter of August the 26th, 1988 which appears at
14 the beginning of the witness statement. It is a letter
15 from Ms. Murphy who does indicate that a lot of the
16 documents which are being produced and have been
17 produced through this panel are documents which will be
18 used by witnesses in subsequent panels.

19 And although the witnesses, particularly
20 Mr. Straight and Mr. Scott, have knowledge of these
21 guidelines, they are not being put forward as qualified
22 witnesses to deal with detailed questions in relation
23 to their contents or specific application.

24 I think I will be relying on those
25 witnesses to indicate where in fact they feel that

1 questions may be getting beyond their level of
2 expertise. So I just wanted to bring that to the
3 attention of the parties and the Board.

4 So, if I might, I will start with Mr.
5 Straight.

6 DIRECT EXAMINATION BY MR. FREIDIN:

7 Q. Mr. Straight, could you please advise
8 the Board what the main messages are that you would
9 like to convey to them this afternoon?

10 MR. STRAIGHT: A. Basically there is
11 three main messages that we would like to have come out
12 in this particular evidence panel.

13 One Mr. Freidin has already referred to
14 in terms of -- and a number I guess, perhaps Mr.
15 Freidin has referred to, but basically the title of the
16 paper is fairly indicative of a major message we would
17 like to leave with the Board and that is that decisions
18 are a blend of Ministry direction and professional
19 judgment and indeed that's a theme that we are
20 presenting throughout MNR's decision-making process
21 within the timber management plan.

22 This particular panel is also an
23 integrating one in the sense that we hope to take you
24 back very briefly to Panel 1 to indicate just again, in
25 a very superficial manner, where we have been.

1 Much of the evidence that we will be
2 presenting in general is there to provide background
3 and information and will be dealt with in many ways
4 through Panels 10 to 14, but also the evidence that we
5 are presenting in terms of an organization and an
6 overview here as well sets the foundation or the stage
7 later on for the monitoring program which will be
8 discussed in 16.

9 Finally, as Mr. Freidin said, I guess the
10 last message is, is that the Ministry does provide
11 assistance to staff to make decisions and this panel
12 presents the kinds of decisions that -- the kinds of
13 assistance that we provide both in terms of written
14 direction, in terms of the utilization of a decentral
15 organization structure; it is a process which
16 encourages information transfer, it utilizes the public
17 and it provides and encourages access to resource
18 experts to assist staff at the local level to make
19 decisions.

20 Q. Mr. Straight, I understand that your
21 evidence this afternoon is going to revolve around two
22 pages in the witness statement, Figure No. 1 at page 85
23 which is entitled: Decision-Making Tools in Resource
24 Management, and Figure No. 4 which is found at page 98
25 which deals with implementation manuals?

1 A. Yes, that's correct.

2 Q. If we might then begin with reference
3 to page 85, Figure No. 1. Could you indicate, Mr.
4 Straight, what purpose this particular figure was meant
5 to -- what was the information or the message that this
6 information was to convey?

7 A. Mr. Freidin, Mr. Chairman, perhaps if
8 I could use an overhead for this.

9 Q. Sure.

10 A. Can everybody see that all right?
11 And the other thing, Mr. Chairman, would it be all
12 right -- am I talking loud enough for everybody to
13 hear?

14 THE CHAIRMAN: Yes. Perhaps if you cut
15 the lights down for just part of the room it would be
16 able to be seen better.

17 Is that going to affect the cameras at
18 all?

19 FROM THE FLOOR: No.

20 MR. STRAIGHT: What I would like to do,
21 if I may, is basically simply use this figure which is
22 in the evidence panel -- the evidence statement to
23 essentially provide a fairly short summary or overview
24 of the evidence that's contained in there and use it in
25 that context.

1 As you can see, there are a number of
2 different colours that were provided in the figure
3 itself specifically to designate those -- or to orient
4 the Board to those particular areas of timber
5 management planning and the evidence that you have
6 heard to date that I will be referring to.

7 The yellow, essentially the area at the
8 top, refers to those pre-existing obligations, if you
9 will, and information on MNR's general management
10 organization which was presented in 1.

11 The blue areas are those specific
12 tools -- or tools in a general sense that the Ministry
13 uses to provide staff with assistance to make
14 decisions.

15 The red in the middle refers or links to
16 the specific area of concern planning process that will
17 be discussed in Panel 15 as part of the timber
18 management planning process and, of course, the red
19 down at the bottom refers to the fact that all of these
20 basic tools, the process and pre-existing obligations
21 become integrated in an effort to make decisions within
22 timber management planning.

23 To very briefly talk to the yellow at the
24 top, you will see that there is reference, provincial
25 policy and procedure. As you recall, Mr. Douglas and

1 Mr. Monzon spoke of that in Panel 1 when they referred
2 to things like forest production policy, moose policy
3 targets from the province, the more broad provincial
4 level of policy and procedural directive which forms
5 part of the overview or base that people making
6 decisions have to consider.

7 The organization itself was fairly
8 thoroughly -- it was thoroughly presented in terms of
9 indicating its decentralized nature. As well, the many
10 acts and regulations that are naturally resourced
11 management based and which MNR administers were
12 presented in that panel with specific reference to acts
13 like the Crown Timber Act, the Public Lands Act, Lakes
14 and Rivers Improvement Act, Fish and Game Act, to name
15 a few of the ones that MNR administers within Ontario.

16 The policy of integrated resource
17 management was introduced in that panel as was the
18 Ministry's management system in terms of strategic
19 planning, district land use planning which essentially
20 established a process which facilitates the process of
21 decisions by staff.

22 That basically provides an overview of
23 those features which have already been discussed and
24 are considered to be sort of the pre-existing
25 obligations, the broad overview that a management team

1 at the local level have to consider when they go about
2 making decisions for the timber management planning.

3 MR. FREIDIN: Mr. Chairman, if I might
4 just advise the Board that in relation to the
5 interrogatories, the following interrogatories were
6 entered because they in fact deal with the subject
7 matter of pre-existing obligations. I don't intend to
8 have the witness refer to them, but NAN 4 which is part
9 of 383A -- but NAN 4, Ministry of the Environment 1(a),
10 and OFIA No. 1 are interrogatories which have been
11 submitted because they speak to the subject matter just
12 reviewed briefly by Mr. Straight.

13 And perhaps I should, just while I am at
14 it, advise you that the other two interrogatories, NAN
15 No. 1 and OFIA No. 6 should be considered along with
16 the evidence given in relation to page 98.

17 MR. STRAIGHT: If I may continue, there
18 are a number of specific tools that MNR uses and those
19 are highlighted in blue. They include scientific
20 literature, they include use of outside experts, they
21 include public consultation, the use of trained MNR
22 staff, the knowledge and experience of the district and
23 written forms of direction which we have referred to in
24 the evidence as implementation manuals.

25 I would like, if I may, just to give you

1 again a very brief overview of a summary of what has
2 been provided in the Statement of Evidence in Panel 8
3 itself.

4 The scientific literature basically
5 within natural resource and environmental fields - and
6 I use them fairly consistently that, in many cases,
7 they may mean one in the same thing - there are
8 currently a number of studies underway, there are also
9 a number of specialists in various fields of
10 environmental science currently conducting work in the
11 whole area of environmental understanding and science.

12 These people appear in universities, they
13 also occur in government agencies other than MNR,
14 whether it be Ministry of the Environment, Ministry of
15 Tourism and Recreation, Ministry of Northern
16 Development and Mines and they also occur in crown
17 corporations and private industry and by that I mean in
18 terms of Ontario Hydro and that kind of thing.

19 As well the evidence presented to date
20 indicates that MNR also contributes towards that
21 research and that scientific understanding and
22 specifically we included some examples of some of the
23 types of work that MNR has been involved with. The
24 Ontario Renewable Resources Research Grant Program is
25 one where MNR contributes towards universities towards

1 improving understanding of how natural resource systems
2 in the environment work which will assist MNR in doing
3 our job with managing natural resources.

4 We also made reference in the evidence to
5 examples of our technology development units in timber
6 and their role in providing the link between scientific
7 knowledge, new information and the link towards
8 implementing that in a technical basis in the field.

9 Our fisheries assessment units, we also
10 refer to in much the same light because they both
11 contribute to the science as well as undertaking the
12 role of transferring that knowledge of science to the
13 working level of the forester or the biologist.

14 We provided information on MNR's own
15 research sections which we have in forests -- in our
16 Forests Program, we have in our Fisheries Program, in
17 our Wildlife Program in particular which contribute
18 towards understanding how the natural world works and
19 how to manage natural resources.

20 And as well we referred to individual
21 staff members within the Ministry of Natural Resources
22 and the kinds of contribution that they make towards
23 new understanding in this area. And it's not uncommon
24 for individual Ministry staff to work with the
25 university professor; Ministry staff at the local and

1 district level working with university people, working
2 with resource science specialists in other outside
3 areas, the federal government as well, to contribute to
4 understanding of those natural resource systems.

5 In terms of district staff - and I am
6 referring here on the chart specifically to the area of
7 trained MNR internal experts - as you saw in Panel 7 in
8 particular, MNR has a reasonably large
9 multi-disciplinary organization when it deals with
10 managing resources, which includes foresters, parks
11 people, fish, wildlife, lands specialists, just to name
12 some of them.

13 We also employ a large number of both
14 professional and technical staff in natural resource
15 management and those people bring with them a basic
16 level of understanding normally through university or
17 community college training with them when they come to
18 the job. We expect our professional and technical
19 staff to keep themselves current in the science or in
20 the particular technical specialty that they have.
21 But, as well, MNR does provide a training program which
22 contributes to their understanding and assists in
23 keeping them current with the latest technology and
24 with the latest scientific understanding.

25 And in our evidence we have provided

1 information on professional training, and I should say
2 first of all that that training normally we have
3 bounded into four broad areas. We have considered
4 professional training as one, technical training, that
5 whole broad area of supervisory/management/
6 administrative types of deals and safety. And within
7 professional training we have provided examples of a
8 forest management model's workshop as one example of a
9 method that we use to keep staff current and that was
10 one that Mr. Armson was involved with putting on and
11 that particular model's workshop was an appropriate
12 example because it is useful within the timber
13 management planning process.

14 We have also referred to the need for the
15 training with a new initiative or a revised initiative
16 that may come within Ministry of Natural Resources, for
17 example, the timber management plan process itself has
18 had with it -- accompany it, and as you will see later,
19 a specific training program to introduce staff as to
20 how to use it.

21 Both the timber management planning
22 training session and the next one which we refer to in
23 our evidence of Forestry and Wildlife in the Boreal
24 Forest, an Ontario Workshop, was an attempt as well to
25 integrate our training programs with -- and the need to

1 ensure that not only our own foresters, our own
2 biologists, our own other staff, but also that industry
3 staff would be kept aware of and brought up to date
4 with some of the current practices and revised thinking
5 that was going on.

6 And, finally, in terms of professional
7 training we have a forester training program specific
8 to the forest program whereby new foresters go through
9 essentially a period within Ministry of Natural
10 Resources in which they are exposed to various timber
11 management actions and activities to increase their
12 understanding and awareness before they are actually
13 put on the firing line, so to speak.

14 The second general area which I referred
15 to was that of technical training, technical training
16 which usually has a foundation in science,
17 science-based technique and we have three
18 well-established -- two well-established programs
19 generally within the Ministry where we deliver
20 technical information in training the staff and one is
21 the Forest Resources certificate course which we refer
22 to in our evidence and the Fish and Wildlife
23 certificate course. And much of those courses are
24 involved with ensuring that our technical people are
25 skilled and being able to use the kinds of tools that

1 have a waters book on fisheries which is the Aquatic
2 Habitat Inventory Program to ensure that our technical
3 staff know how to conduct a regeneration survey or to
4 make some kind of assessment as to the land base and
5 its implications with regard to timber management.

6 As well, there are special technical
7 courses which we may carry out and we have provided
8 specific information, as an example, on the water
9 crossings workshop within the text which was held
10 between ourselves and, myself in this case as deputy
11 regional director in the northeast region and the north
12 central region where we shared expertise, put on a
13 course and instructed both Ministry staff and company
14 staff in terms of water crossing procedures.

15 A lot of that you will have an
16 opportunity to see even later when Bruce Addison comes
17 to talk to you about access because he was one of the
18 specific individuals involved in giving that particular
19 course.

20 The whole general area of supervisory,
21 managerially and administrative training is an
22 extremely important one and deals with ensuring that
23 our staff can successfully utilize these tools in terms
24 of carrying out a successful program in timber
25 management. And we refer to a number of courses within

1 the document that the Ontario Human Resources
2 Secretariat supply which happen to provide a very ready
3 reference and a number of courses which are easily
4 accessible to staff and to supervisors who may want to
5 put staff on courses.

6 We also provided an example of a specific
7 type of need or understanding within that overall
8 context of supervisory/managerial type of training
9 where we have provided examples of native awareness
10 courses that we have put on to assist our staff in
11 understanding some of the particular problems or issues
12 which natives may have with the way MNR does business
13 generally.

14 MRS. KOVEN: Excuse me, Mr. Straight. Is
15 that a continuing course or was that just held in
16 1983/84?

17 MR. STRAIGHT: Those particular courses
18 are not continuing as such. They have basically been
19 initiated on as need basis, but that was one of about 3
20 within that particular period that I was aware of.

21 And, as well, we indicated the general
22 area of safety as a specific training need and we
23 provided information on a district safety orientation
24 package which is fairly common to each of our district
25 organizations and also identified an example where a

1 particular type of activity, in this case crew member
2 training for fire operations had specific -- its own
3 specific safety requirements and, in those kinds of
4 instances, a special program is devised.

5 And, of course, throughout all of our
6 need for training and delivery of that program, the key
7 to it is essentially the performance management cycle
8 and we have provided evidence in the text to indicate
9 that MNR does have a very active and a very conscious
10 program of performance appraisal and staff
11 communications which is utilized to identify training
12 needs and to improve the ability of our staff, not only
13 to deliver their program, but also to prepare them for
14 future advancement.

15 Some of those people -- and you have seen
16 some of those people which have actually been a party
17 or part of that process, the Neville Wards, the John
18 McNicols, the John Osborns, and you will be seeing a
19 great many more of them as the evidence progresses
20 through further witness panels.

21 The third area we would like to talk
22 about generally as a tool that MNR uses to encourage or
23 assist staff in making decisions is essentially not
24 only the internal provision of experts on staff but
25 also an encouragement to use expertise outside MNR to

1 make decisions.

2 And I have made a bit of a break here in
3 looking at the district organization in terms of
4 presenting this to you and the regional one and main
5 office, but MNR in its own capacity has a number of
6 specialists or experts, as you will. You can look at
7 Neville Ward who I have just referred to and who you've
8 heard and basically we utilize Neville in a habitat
9 protection mode, if you will, and that has been a very
10 conscious decision and he has become -- he has
11 developed expertise in that particular area.

12 Similarly, most regions will also be
13 blessed with resource experts, either engineering staff
14 or perhaps a moose biologist or a deer biologist and,
15 as well, our main office people have expertise in
16 various areas of forest management. John Allen, whom
17 you will hear about in Panel 10 and who is one of the
18 individuals involved in preferred development, for
19 example, the guidelines -- Timber Management Guidelines
20 to Protect Fish Habitat, will be making some specific
21 presentation to you.

22 MNR also has ready access to a large
23 number of other environmental experts and we felt the
24 simplest way to demonstrate that to you was simply to
25 put extracts from the government phone book in our

1 evidence and also specific extracts from the Great
2 Lakes Forest Research Centre and Forest Management
3 Institute, which happens to be some of the more common
4 sources of experts that we use, as well as the Canadian
5 Wildlife Service for example.

6 We readily encourage our staff to contact
7 individuals when they require that kind of expertise or
8 assistance in making decisions and it is with that idea
9 behind it that we expressed it in the way we did.

10 We also provided a specific example of
11 Ministry of Natural Resources library facilities in
12 terms of how they can be used and how easily accessible
13 they are as further support to staff to find -- to be
14 able to utilize information to assist in making
15 decisions.

16 Just in a sense to provide some linkages
17 back to experts in some of the other training
18 mechanisms, the Wildlife and Forestry in the Boreal
19 Forest Workshop, for example, did bring in a Mr. Dan
20 Welch who happens to be an expert in migratory birds
21 both as a speaker at that particular workshop and, in
22 fact, with Mr. Welch, in a lot of my previous
23 capacities as a regional biologist in the northeast
24 region, I happen to have collaborated with Mr. Welch in
25 terms of conducting some particular moose work that he

1 was carrying out and providing sort of some
2 organizational support to him.

3 And it has always been my understanding,
4 or it has always been my experience that our staff
5 establish those kinds of liaisons with experts
6 reasonably commonly as they attend professional
7 conferences or as they go about conducting their daily
8 work. Mr. Thompson, also who has conducted some work
9 on furbearers in I believe it's Geraldton District, is
10 working now with the Canadian Wildlife Service was
11 another speaker at that particular workshop and he
12 dealt with furbearers in forest management.

13 Now, I don't -- the fourth point
14 basically, the local knowledge and experience of
15 district staff. I am aware and saw some of how well
16 Mr. Clark and Mr. Pyzer covered that particular area.
17 It is not my intent to go into an awful lot of depth on
18 it other than basically to support the comments that
19 they made to the Board.

20 The Ministry of Natural Resources'
21 offices are centralized and distributed throughout the
22 area of the undertaking, basically they have been
23 around for a long period of time and, in that context,
24 information does accumulate, does get stored both as
25 staff learn more and with just basically the basic

1 record-keeping systems of the district; that is a major
2 asset to our people in their understanding of natural
3 resources within that geographic location and that kind
4 of information is invaluable in making resource
5 management decisions.

6 Most district managers -- I should say
7 all district managers have the responsibility to try
8 and balance the tenure of staff and staff turnover. It
9 always tends to be an issue, it is something that is
10 both positive -- that is positive if it's kept in the
11 appropriate perspective, the introduction of new ideas,
12 fresh knowledge to staff with the continuity of both
13 the long-term presence and staff who have been in the
14 area for some period of time provide the very positive
15 contribution to resource management understanding and
16 knowledge.

17 Public consultation as well is one of the
18 tools that MNR uses. My intent is not to spend much
19 time on it because it will be discussed -- it was
20 discussed in 7 Panel 7 to some degree; it is also
21 mandatory within the timber management planning process
22 and, in that context, very much a part of it and will
23 be discussed in some depth in Panel 15.

24 We used it within our evidence though to
25 essentially reinforce the fact that it is a valuable

1 decision-making tool in that it identifies new
2 information, it also provides new ideas that the public
3 may have to MNR in terms of mechanisms for managers to
4 mitigate or to minimize or to prevent environmental
5 impacts. We look at it as an excellent opportunity for
6 dialogue to improve public understanding and also to
7 generate public support and, of course, the process
8 also is one which allows and provides a forum in which
9 MNR's actions become publicly accountable.

10 The last tool basically that I would like
11 to refer to discuss is that concept of implementation
12 manual and, as you will note, these are very specific
13 written directions which MNR delivers to staff to
14 assist in making decisions.

15 MR. FREIDIN: Q. I understand that you
16 are going to go to Figure 4 now which deals with those
17 particular manuals on page 98?

18 MR. STRAIGHT: A. Yes. As Mr. Freidin
19 has said, this essentially is Figure 4, this is Figure
20 4 on page 98 and it deals with that whole general
21 grouping of implementation manuals for those kinds of
22 written direction, advice and education that the
23 Ministry provides to staff to make decisions.

24 Those manuals have been placed within the
25 context of an organizational framework to facilitate

1 understanding and the three general ones that we deal
2 with are those which are bounded in yellow on the
3 overhead which deal with provincial guidelines. Those
4 which are blue in the overhead, which we have called
5 resource for environmental manuals, and those which are
6 red which we have referred to throughout the evidence
7 and the Environmental Assessment Document as
8 construction and operational manuals.

9 There are a number of values, if you
10 will, resource environmental values which within
11 Ministry of Natural Resources' experience have commonly
12 been raised within the context of timber management
13 planning. Those particular values at this point have
14 been with respect to fish habitat, moose habitat and
15 tourism values and, as well, silvicultural values or
16 regeneration values, if you will, in that context.

17 Generally the Ministry has recognized a
18 number of factors or principles that we consider when
19 we deal with the issue of whether or not we should
20 apply -- whether we should develop a provincial
21 guideline in that context and, as has been presented in
22 the evidence in the Environmental Assessment Document,
23 the factors that we consider are the social or economic
24 importance of the value, whether there is a
25 demonstrated potential for significant impact on the

1 value as a result of timber management activity,
2 whether the value is broadly distributed over the
3 timber management area and if protection or
4 minimization or mitigation effects of timber management
5 can be dealt with using a consistent approach.

6 As I had indicated, within the
7 document -- within the evidence to date, you will note
8 that there are basically the four values for which
9 provincial guidelines have been developed.

10 And if I could, those four values as I
11 mentioned earlier regarding moose habitat, fish
12 habitat, tourism values and, in the area of
13 silvicultural guidelines.

14 Noted on Figure 4 a number of
15 characteristics or concepts, if you will, that are
16 generally associated with the introduction of a
17 provincial guideline, and the first one we call basic
18 levels of information.

19 Our philosophy or our approach here was
20 fashioned on an understanding that to be able to apply
21 guidelines to protect a value, obviously there was some
22 basic level of information that was required before the
23 guidelines could be implemented, and that's the context
24 in which you see those particular characteristics being
25 presented.

1 Q. Now, Mr. Straight, the Environmental
2 Assessment Document itself refers to minimum levels of
3 information in it. Was the use of the word basic an
4 intentional change of wording?

5 A. There was an intentional change of
6 wording there, Mr. Freidin. What we found was that in
7 fact minimum levels of information which we have used
8 in the past was being misinterpreted and confused in
9 the context of there being some minimum standard that
10 was identified probably in terms of the guidelines
11 themselves or the use of the guidelines themselves.

12 The application of the guidelines in fish
13 habitat is probably the closest that meets that
14 particular concept and that is where there is a minimum
15 standard level of information and quality of
16 information which must be obtained before you can take
17 specific or different types of action. That's the only
18 context in which the guidelines are applied with that
19 kind -- in that kind of a fashion.

20 In reality, probably basic is a much
21 clearer word to use in terms of promoting understanding
22 because, for example, in terms of applying the
23 guidelines to protect tourism values, the main
24 information that you really require that gets you
25 started out on that process or the basic level that you

1 need is knowledge that that value exists and to imply
2 that that's a minimum standard seems to take it a
3 little out of context. So it was to improve
4 understanding in that particular case.

5 The second characteristic, and that is
6 mandatory application, refers to the principle that the
7 guidelines must be utilized in timber management
8 planning.

9 In terms of developing the guidelines, we
10 also recognize that it was important both to
11 provincially coordinate their deliveries and ensure
12 that they were being used through the conduct of
13 provincial auditing programs. They were formulated or
14 developed dealing with values which have surfaced
15 commonly as being issues across the area of the
16 undertaking, if you will, that arise in timber
17 management planning. Their development incorporated
18 the range of possible effects that could occur over
19 that area and, in that context, there was provincial
20 coordination in the design.

21 It is also our intent to ensure that
22 those guidelines -- the delivery of those guidelines in
23 the field is similarly coordinated, that staff
24 understand the rationale behind the guidelines and that
25 they understand the manner in which they are to be

1 applied through a provincial training program.

2 The audit referred to is basically a
3 part, or will become a part of our normal operational
4 audit process in the Ministry which occurs; main office
5 essentially auditing regions for delivery of targets
6 and for concurrence with policy and a similar audit
7 program whereby regions audit districts for, again, the
8 same sorts of things.

9 The audit program itself will be
10 discussed thoroughly in Panel 16 when we deal with
11 monitoring.

12 Q. In relation to that particular item
13 of provincial coordination which is directed towards
14 having a common understanding of the guidelines, could
15 you advise what the present status of that particular
16 coordination is?

17 A. At the moment the Ministry has
18 initiated a process whereby we are examining both the
19 aspects of the guidelines that could be misinterpreted
20 and through essentially a northern Ontario review or
21 committee structure here of field staff to ensure, most
22 of all -- first of all, that we are interpreting the
23 guidelines consistently or in a rationalized manner and
24 to look at the mechanisms and the time frame and the
25 means by which we will implement or actually deliver

1 the training program to compliment the guidelines.

2 Mr. John Kenrick, who had earlier been
3 here providing evidence with regard to Panel 6, I
4 believe, is the individual that's been charged with
5 developing that particular program for implementation
6 of the guideline.

7 Q. And I understand that there are
8 training sessions which are almost imminent in relation
9 to the coordination of the moose habitat and the fish
10 habitat guidelines?

11 A. The actual plans and scheduling of
12 those will be done in the reasonable near future, yes.

13 Q. In terms of auditing, are you
14 aware -- is there anything within the timber management
15 planning process itself which deals with the auditing
16 of the application of these provincial guidelines that
17 you have referred to?

18 A. I think you may be referring here,
19 Mr. Freidin, to basically a pre-approval audit, if you
20 will. There is a process within the timber management
21 plan -- there is a mechanism within the timber
22 management planning process whereby the regional
23 director reviews plans prior to their -- prior to him
24 approving them to ensure conformity or compliance with
25 the application with the guidelines.

1 There is a draft procedure on this right
2 now which will be presented, I believe in Panel 15, in
3 terms of the timber management planning process itself
4 which will provide you with the details of how that
5 occurs.

6 In terms of my own personal experience as
7 an advisor to the regional director, this is basically
8 a standard part of the way we do business. A plan
9 comes into the region for approval, essentially I ask
10 our resource specialists, our fisheries people, our
11 wildlife people, our planning specialists, our timber
12 planning specialists to ensure that they have reviewed
13 the guidelines so they can report to the regional
14 director on the degree of a compliance with the
15 guideline have been achieved before he signs and
16 approves the plan.

17 Q. Now, I have a few questions for Mr.
18 Scott. In relation to training, particularly in
19 relation to these guidelines, can you advise, Mr.
20 Scott, is there a formal process for training people
21 who are going to become engaged in timber management
22 planning?

23 MR. SCOTT: A. Yes, we do have in the
24 Ministry of Natural Resources a timber management
25 training course -- a timber management planning

1 training course which covers a wide variety of subjects
2 that the planning team must confront and touches upon
3 the broad base of issues relative to doing their timber
4 management plan.

5 Q. And how often are these training
6 courses held?

7 A. I am aware right now that we in the
8 past year have held one course in Thunder Bay and one
9 in Sault Ste. Marie, one in Sudbury and one in
10 Huntsville, all within the area of the undertaking.
11 And I believe we have trained somewhere in the
12 neighbourhood of 450 to 500 staff in timber management
13 planning and they would be primarily people on planning
14 teams and people also in companies who serve our
15 planning teams as well.

16 Q. Is there any sort of standard
17 approach as to when this planning course is taken by
18 people who are going to be writing plans in relation to
19 their task of actually writing the plan?

20 A. In my experience, the planning teams
21 that I have been on, they have taken the course at the
22 initial stages of doing that, the timber management
23 plan.

24 Q. And can you advise how long a
25 training course for people involved in timber

1 management planning has been actually in place in the
2 Ministry?

3 A. The courses are -- I am sorry, could
4 you repeat the question again?

5 Q. How long has this planning process
6 that you are referring to been in place, training
7 members of planning teams?

8 A. The first planning course was held in
9 February of 1988. So we have held courses -- I believe
10 that was February 15th to 17th last year and that was a
11 provincially directed course. Again, there was firm
12 direction that all planning team members would take
13 that course and it was about a two and a half day
14 session of lecture series. I believe it is now more of
15 a workshop format.

16 Q. All right. Who conducts these
17 planning sessions?

18 A. Someone from our Timber Management
19 Section, Timber Sales Branch of the forest resources
20 group will chair the session and coordinate it.

21 The actual speakers are taken from
22 expertise in the field within MNR and also using
23 outside expertise dealing with a broad range of
24 subjects from areas of concern planning. We may have
25 John McNicol, who the Board has seen before I believe

1 in Panel 7, gave the session on application of moose
2 guidelines.

3 Some of our planners such as Jim Jackson,
4 who is a regional planner in northcentral region, has
5 given sessions. Some of the expertise and experience
6 gained by our Ministry people has been passed on to the
7 planning teams by that way. So there is a wide variety
8 of speakers at each of these courses.

9 Q. Does the subject of protection of
10 non-timber values come up for discussion during these
11 training sessions?

12 A. My understanding right now, the way
13 the course is running, there would be approximately a
14 half day lecture time spent on dealing with protection
15 of other values and there is also a workshop exercise
16 which takes about a half day to complete as well. So
17 approximately one third of the course would be directly
18 involved in dealing with management of other values.

19 Q. So that is a three day course that we
20 are talking about in total?

21 A. In total, yes.

22 Q. Can you advise, has the content of
23 the training courses changed over the last year?

24 A. In my understanding, the content of
25 the course has been somewhat the same although it has

1 been revised a little bit of format for a little more
2 effective delivery and, of course, a certain change in
3 speakers gave a little different experience to the
4 course, but it covers essentially all the topics that
5 are required to cover when doing a timber management
6 plan and, with some minor variation, essentially the
7 content has remained the same.

8 Q. Is there any mechanism in place or
9 has there been any mechanism in place designed to, I
10 guess, monitor the planning process with the intent of
11 improving or changing it where required?

12 A. I assume you are referring to change
13 in the course where required; is that correct?

14 Q. Yes.

15 A. Yes. There is an evaluation done.
16 Because it is a provincial course and coordinated
17 provincially, one of our provincial management planning
18 specialists will evaluate the course in terms of its
19 effectiveness to achieving the objectives of training
20 in timber management planning processes and if there
21 are any shortfalls, of course, will direct themselves
22 to that.

23 Certainly if there is any new
24 information, we can add that into a new training
25 session at any time.

1 Q. Do any changes to the -- I will go
2 back to you, Mr. Straight. You were referring to the
3 mandatory application of these guidelines and you
4 indicated that the use of them is mandatory, the use of
5 these provincial guidelines is mandatory.

6 Could you perhaps expand a little bit on
7 what you mean by that when you say the use of them is
8 mandatory?

9 MR. STRAIGHT: A. The basic concept we
10 are trying to get across is that the guidelines are to
11 be used by staff in making decisions within timber
12 management planning. So the primary emphasis on the
13 word mandatory refers to the fact that they shall be
14 used.

15 If you actually get into the guidelines
16 themselves, you will see that there are different
17 degrees of direction and rigidity or flexibility of
18 direction either in the guidelines themselves or the
19 policy or procedures directing how they should be
20 implemented.

21 And perhaps the two at the extreme ends
22 of the scale, if you will, would be the tourism
23 guidelines on one hand which request that staff use the
24 manual essentially, that the results -- and provide a
25 number of different suggestions within the guidelines

1 as to how effects can be prevented, minimized or
2 mitigated.

3 But essentially the outcome is very
4 basically the results of having gone through the
5 process and, in concert with the particular
6 stakeholders involved, the tourist operators, the
7 timber industry and at least the Ministry of Natural
8 Resources.

9 On the other hand, the fisheries
10 guidelines and the policies which indicate how they are
11 to be used do tell you very explicitly how to react in
12 very certain situations specifically when it comes to
13 different types of information which you may have
14 available.

15 So within that general context perhaps
16 that helps provide some understanding of the use of
17 that term. But its primary emphasis is to indicate
18 that the guidelines are to be used.

19 THE CHAIRMAN: What happens, Mr.
20 Straight, if they are not used in a particular instance
21 that is identified where you have one of the guidelines
22 and you find out subsequently that they were not in
23 fact used?

24 MR. STRAIGHT: In terms of tracking that
25 particular instance from an administrative point of

1 view, it would -- and the current way we do business in
2 my experience in the northwest region, we will find
3 that out throughout the area -- our reviews of the area
4 of concern planning process and how that was reported
5 in the timber management planning itself. That's how
6 we would -- in the sense that fits also with that
7 pre-approval audit that I was referring to, we would
8 pick it up in that context.

9 MR. FREIDIN: Q. And if you picked it up
10 in that context, you would be picking it up before any
11 on-the-ground activities occurred?

12 MR. STRAIGHT: A. In that context, it
13 would be before plan approval and before any activity
14 occurred.

15 The fourth characteristic that you see
16 relating to provincial guidelines refers to the fact
17 that the application of those guidelines at the
18 operational level within the context of conducting
19 timber operations would be assessed as part of our
20 compliance monitoring program at the local level and
21 also would be assessed with regard to observable levels
22 of impact that may have occurred as a result of
23 applying a particular prescription.

24 In many ways that particular
25 characteristic is put there to compare to Item 5 which

1 speaks to assessment of effectiveness of provincial
2 guidelines as a general principle that the Ministry is
3 following and fits within the context that basically we
4 have generated into provincial directions as to how to
5 deal with limiting effects on a specific -- or
6 preventing effects on specific parts of the
7 environment.

8 And having done that over a broad area of
9 the undertaking allows us to generate a specific type
10 of effectiveness monitoring program to test whether or
11 not those guidelines are indeed effective in terms of
12 preventing, minimizing, mitigating or, in the case of
13 moose guidelines, in terms of enhancing values.

14 And you will see in 16 where that
15 particular -- the results, or how that particular
16 characteristic manifests itself within the timber --
17 within our monitoring program that we are proposing.

18 The guidelines, as has been stated in
19 evidence, have been developed essentially in concert
20 with public stakeholders, Ontario stakeholders and at
21 the same time it is a characteristic of them and a
22 principle of the Ministry that indeed we will continue
23 to review the effectiveness of those guidelines with
24 stakeholders as part of our monitoring program, which
25 you will see later, and also that any revision of the

1 guidelines occur would similarly occur in concert with
2 public stakeholders review.

3 Q. Mr. Straight, you indicated that -
4 and this may be getting into 16 - you said that
5 monitoring of the effectiveness would involve the
6 stakeholders, and who is included in stakeholders when
7 you are referring to monitoring the effectiveness of
8 the guidelines?

9 A. When -- again, Mr. Freidin is to some
10 degree jumping into 16 -- you will see that, but also
11 you will see as part of the evidence that this panel
12 will present examples of those stakeholders which were
13 used in designing our effects monitoring program which
14 Dr. McNamee will be referring to and, in that
15 particular context, those stakeholders will be
16 identified.

17 The way in which we use them in
18 developing the effects monitoring program concentrates
19 on technical advice to that particular process.
20 Generally the context in the future, in terms of
21 periodic review and revision of the effects monitoring
22 process, again, builds upon that contribution that
23 those stakeholders made, the foundation or base level
24 of development of our effects monitoring program, and
25 plans to continue that kind of dialogue and

1 communication in the future.

2 Q. Are there any provincial guidelines
3 being prepared at the present time so that once
4 complete there will be more provincial guidelines than
5 the ones you have referred to this afternoon?

6 A. There are two other values for which
7 provincial guidelines are currently in the process of
8 being developed. The one is with respect to heritage
9 and cultural values for which basically a committee of
10 Ministry staff, other interested and involved
11 government agencies, as well as public stakeholders
12 have been involved in developing those particular
13 guidelines. That process is well in place.

14 I believe that they are well on their way
15 of developing at least a working draft for their own
16 use and our final product would be developed in the
17 near future.

18 As well, it is the Ministry's intention
19 to revise -- not to revise, but essentially to upgrade
20 what exists now as a resource and environmental manual
21 for deer to the status of provincial guidelines and
22 with that modification and revision will come a
23 complete internal review, as well as a public
24 stakeholder review before there are improved guidelines
25 developed.

1 Q. In relation to the guidelines being
2 prepared for heritage values, are any other ministries
3 of the Ontario government involved in that other than
4 MNR?

5 A. Other ministries are involved in the
6 development of that one. Basically the -- certainly
7 the archaeological people. I can get you the exact
8 listing of them. I don't know what the exact ones are.
9 I certainly can provide access to that if you want one.

10 Q. Which Ministry is involved or has the
11 expertise in relationship to the archaeological
12 matters?

13 A. It is basically the Ministry of
14 Citizenship and Culture in my understanding.

15 Q. All right. Are you aware as to
16 whether they are one of the members of that group?

17 A. I am certain that they are a member,
18 yes.

19 Q. Thank you. Perhaps you could
20 indicate to me, Mr. Straight, when you are finished
21 with provincial guidelines because I wanted to ask a
22 few questions of Mr. Scott before you left -- went on
23 to the next area.

24 A. I think I would proceed right now on
25 to basically resource environment manual section.

1 Q. All right. Mr. Scott, under this
2 heading Provincial Guidelines we have reference to
3 silvicultural guides and I understand that Exhibit 382
4 is the Silvicultural Guide for the Spruce Working Group
5 in Ontario.

6 MR. SCOTT: A. That's correct, yes.

7 Q. And I believe that there is a
8 connection that should be made in terms of how this
9 particular guide is described in the Environmental
10 Assessment Document; is that correct?

11 A. Yes. In the Class EA Document it is
12 referred to as a silvicultural guide to the black
13 spruce working group and that's the same -- that is
14 consistent with our witness statement.

15 However, the actual description is a
16 silvicultural guide to the spruce working group in
17 Ontario -- I should say, for the spruce working group
18 in Ontario. The distinction is that they have added
19 white spruce silviculture characteristics along with
20 black spruce.

21 Q. Could you describe in general terms,
22 Mr. Scott, what a silvicultural guide is?

23 A. A silvicultural guide describes
24 characteristics, silvicultural characteristics of the
25 main tree species and the working groups.

1 If I look at the spruce guide which I
2 have in my hand here, it will describe the
3 silvicultural characteristics of spruce, how the tree
4 will grow, how it produces seed, how it will
5 regenerate, some of the mechanisms for harvesting it,
6 some of the mechanisms to regenerate the trees
7 themselves. The working group species I believe has
8 been defined by Mr. Osborn in an earlier panel.

9 Q. And is there a section of this
10 particular guide that deals with silvics?

11 A. Yes. If I may take a moment to go
12 through the spruce guide a little bit, I can maybe
13 demonstrate on how it works and what it is about, pick
14 up the guide here.

15 First of all, if I turn to page number IX
16 in the guide itself, we have an acknowledgement section
17 which shows a wide range of scientific opinion that can
18 be incorporated into the guides.

19 We have at the top of the page, six
20 authors to the spruce guides. However, in addition to
21 that, there are lengthy sections specifying some of
22 the people who have contributed to the silvicultural
23 guides and you can see just by reviewing that
24 yourselves that there are many, many people who have --
25 we have solicited their expertise in a contribution for

1 the guides.

2 Also the guides -- as we get to the
3 silvics I will refer back to the Table of Contents -
4 and that would be the second page in here, Mr.
5 Chairman - I direct your attention to that. The focus
6 in Section 2.0 really specifies the silvicultural
7 characteristics. I thought of a way that I can really
8 zero in on how the guides work, using silvicultural
9 characteristics, would be to go to the section on
10 reproduction and if you look at the Table of Contents
11 on Reproduction that would be on page 27.

12 If I was to use these guides for the
13 silvicultural characteristics -- sorry, that's white
14 spruce reproduction. I would like to look at the black
15 spruce reproduction on page 16. An application might
16 be the guides where I want to find out how to pick
17 cones for my regeneration program in spruce. I could
18 refer to the reproduction section on page 16.

19 It is silvicultural science on black
20 spruce, it tells me that the cones are semi-serotinous,
21 it tells me that seed last in the cones for up to five
22 years, so that if I am collecting cones off a tree, I
23 can have a five-year-old cone and still get good seed
24 out of it. It gives me a number of characteristics of
25 the specific science of that species that help me apply

1 to my management practices.

2 That's just one brief example that you
3 can see as we leaf through here. There are many
4 references to specific silviculture that all may apply
5 in the same way.

6 Now, there is also a section on wildlife
7 considerations for the species. If I can come to page
8 33 of the silvicultural guide for spruce, it starts an
9 extensive description of some of the species that I
10 might find and the range where spruce grows and really
11 what this guide will do, focusing a little bit away
12 from silviculture, but it will direct me to the actual
13 provincial guidelines which may apply in the management
14 of spruce.

15 For example, moose occurs in the spruce
16 range and on page 36 it suggests that for large mammals
17 for further details see Timber Management Guidelines
18 for the Provision of Moose Habitat and this wildlife
19 section is written to direct me to those areas where I
20 may consider further wildlife species.

21 Q. Is this type of Section 1 which has
22 commonly been included in other silvicultural guides?

23 A. The spruce guide is the first guide
24 that that's been written in, but it will be included in
25 all the future silvicultural guides as they are being

1 rewritten now.

2 Q. I understand that there are a number
3 of guides which are in fact being rewritten at this
4 very moment?

5 A. Yes. The poplar guide should be
6 printed, I would say, certainly by the end of February
7 is my understanding. The guide for the jack pine
8 working group was rewritten and reprinted in 1986 and
9 will come for renewal at a later date. It does not
10 have the wildlife sections as yet.

11 The tolerant hardwood guide should be out
12 by late spring, maybe the end of June even and the
13 management of the white pine working group, that new
14 guide is being rewritten and drafted and we are
15 expecting that to be back from the printers some time
16 early in the fall.

17 If I can carry on looking at the spruce
18 guide, I would like to refer to a table in the spruce
19 guide on page 44 because this table on page 44 really
20 summarizes the application of the guide to manage under
21 the spruce working group. We have at the top of the
22 table a management objective for the working group
23 which is established and a number of inputs into that
24 management objective.

25 Q. This would be an objective for the

1 management unit?

2 A. Yes, it would be and I believe we
3 have listed 22 different kinds of inputs that would go
4 in to how we make silvicultural prescriptions. You can
5 see some of them: Site factors, stand and age factors.

6 If I take some of those factors, like
7 wildlife factors, for example, the species we deal
8 with, there are a number of sub-headings under that.
9 The combinations and permutations of inputs that go
10 into a silvicultural decision could literally reach
11 millions of combinations. Just if we take these 22
12 factors alone and you apply normal permutation
13 mathematics, there are literally millions of
14 combinations of descriptions.

15 So we kind of group them together, blend
16 in our judgment and make our management strategies,
17 decide on our silvicultural systems which leads to our
18 harvesting patterns and all down in the table. And
19 some of the considerations that go into this table are
20 written in the silvicultural guides up front.

21 Lastly if we want any further
22 information, one of the things that for certain the
23 spruce guidelines is very handy for is a fairly
24 exhaustive section of site selection which let's us
25 zero in on any further information we may want to use

1 when we make our silvicultural prescriptions, perform
2 our ground rules in the TMP and use the guide for those
3 purposes.

4 Q. And could you just very briefly
5 describe to me how a silvicultural guide like this
6 would be used in the preparation of the silvicultural
7 ground rules in a specific timber management plan?

8 A. Again, knowing the silvicultural
9 characteristics of the species, some of the
10 environmental and wildlife considerations there is a
11 Section 3.0 on management prescriptions which really
12 key in on the kinds of systems that can used for some
13 of the different circumstances that may apply in the
14 field.

15 These general type of scenarios can be
16 blended into actual local specific conditions on a
17 timber management plan based on inventory, some of the
18 sites in the area and a blending those two factors
19 together we can rewrite or prepare silvicultural ground
20 rules to the timber management plan and that is how the
21 silvicultural guides really impact on the timber
22 management planning process.

23 MR. FREIDIN: Mr. Chairman, the witnesses
24 who will be appearing in Panels 10 through 15 will all
25 have experience in the field, not all those people, but

1 there will be people on those panel with experience in
2 actually preparing silvicultural ground rules in
3 relation to specific species and they will be able to
4 call on their general knowledge in order to explain
5 this information further.

6 MR. SCOTT: Also...

7 THE CHAIRMAN: Mr. Freidin, is this a
8 good time for the afternoon break?

9 MR. FREIDIN: I think probably one more
10 comment from Mr. Scott will complete this particular
11 area.

12 MR. SCOTT: As a good example of how they
13 are used, Appendix A does provide an example of ground
14 rules to a timber management plan and I think coming up
15 with these ground rules is one of the key uses of these
16 silvicultural guidelines.

17 MR. FREIDIN: Q. What page do we find
18 that?

19 MR. SCOTT: A. Appendix A would be on
20 page 85.

21 THE CHAIRMAN: Very well, Mr. Freidin, we
22 will break for 20 minutes.

23 Thank you.

24 ---Recess taken at 2:40 p.m.

25 ---Upon resuming at 3:00 p.m.

1 THE CHAIRMAN: Thank you, ladies and
2 gentlemen. Please be seated.

3 MR. FREIDIN: Q. One question for Mr.
4 Scott before we go back to you, Mr. Straight.

5 Mr. Scott, when you were giving evidence
6 about training courses starting --

7 MR. MARTEL: Could we get some lights on.

8 THE CHAIRMAN: Excuse us one minute, this
9 window is open up here, it's quite cool.

10 MR. FREIDIN: Sure. We are going to be
11 back to the overheads in about two minutes. I guess
12 that is why they are out, Mr. Martel.

13 MR. MARTEL: Okay, thanks.

14 MR. FREIDIN: Q. Mr. Scott, you were
15 giving some evidence about the timber management
16 planning training course and you indicated to me that
17 courses start in 1988. Can you advise me were the
18 courses that you referred to provincially coordinated
19 courses?

20 MR. SCOTT: A. Yes, that was -- my
21 testimony, Mr. Freidin, was that the provincially
22 coordinated course started in 1988.

23 Q. Were there any courses before 1988
24 although they may not have been provincially
25 coordinated?

1 A. Well, I recall chairing a licensing
2 section on a timber management planning training course
3 in 1985 in Kenora regional office for the northwest
4 region. I am also aware that in northcentral region
5 they would hold numerous courses for timber management
6 planning training sessions as well and my understanding
7 is that in other regions too similar things were being
8 done on an as needed basis, I would say certainly since
9 the mid-70s beyond.

10 Q. Mid-70s?

11 A. Mid-70s, yes, using the old manuals.
12 In 1985 when we gave the workshop in Kenora that was to
13 the updated timber management planning manual of the
14 day, but it is not uncommon for regions to conduct
15 timber management planning sessions according to their
16 needs.

17 Q. Just so I can be clear now, so do you
18 mean the mid-80s, or are you talking about the mid-70s.

19 A. No, I would say these regional kind
20 of courses dated back to the mid-70s.

21 Q. Okay, thank you.

22 Mr. Straight, if you can continue on and
23 deal with the last two type of implementation manuals
24 which are described in Figure 4.

25 MR. STRAIGHT: A. As we described

1 earlier, there were basically the three types of
2 general written direction which the Ministry uses to
3 help staff make decisions. We referred to the first
4 group as the provincial guidelines.

5 The remaining two categories of manuals
6 are basically those which we have chosen to call
7 resource environmental manuals and also construction
8 and operational manuals.

9 Resource environmental manuals are
10 generally to assist local planning teams to deal with
11 environmental issues which crop up within timber
12 management planning but normally not to the same
13 degree -- not to the same level of frequency as has
14 occurred with values generally recognized by protection
15 with provincial guidelines.

16 Those resource or environmental manuals
17 are normally approved at the branch or the program
18 level within the Ministry. They generally represent a
19 compendium, if you will, a summary of the current
20 scientific information that is available, the results
21 of experience of Ministry of Natural Resources
22 practicing managers and are there to provide assistance
23 in decision-making.

24 Generally speaking, their application is
25 discretionary upon values being identified as opposed

1 to the case with provincial guidelines where there is a
2 greater sense of Ministry direction, or there is more
3 Ministry direction to ensure that they are used.

4 The monitoring program, as you will see
5 later in evidence as well, is primarily achieved
6 through local monitoring to ensure that the
7 prescriptions that were chosen to protect those
8 particular values are indeed complied with and, again,
9 to review while doing that compliance monitoring
10 whether or not indeed there are any observable or
11 obvious impacts on the resource value which you set out
12 to protect and should be recorded.

13 They are reviewed and revised essentially
14 on an as need basis; as the results of scientific
15 literature, as the results of new experience suggests
16 that there is a need to revise or change the direction
17 of those manuals, then it would be an internal decision
18 essentially that that is the course of action we should
19 take.

20 And, of course, in terms of the degree to
21 which they are used, generally speaking, would be
22 identified and measured as part of a regional auditing
23 program whereby regional staff would audit the
24 performance of districts.

25 We make the one anomaly in this

1 particular case in the sense that when we are dealing
2 with protecting the habitat of endangered species,
3 since we are talking about habitat which is protected
4 by law, upon identification of those species, the
5 applications of those manuals dealing with protecting
6 habitat for endangered species would be required or
7 would be utilized by district staff.

8 Q. Mr. Straight, in relation to Item No.
9 2 under resource environmental manuals you refer to
10 impact and in your -- you said observable impact. Are
11 there other kinds of impact which you were not
12 including when you use the word impacts in this
13 context?

14 A. You will see in Panel 16 development
15 of the monitoring program, the effects monitoring
16 program for the Ministry that we distinguish between
17 two types of monitoring; effects and effectiveness, and
18 we distinguish between two forums or focuses in which
19 the Ministry deals with that monitoring, one at the
20 provincial level and one at the local level.

21 When we talk about effectiveness
22 monitoring, we are normally talking about whether or
23 not we were effective indeed in preventing, minimizing
24 or mitigating as a result of applying the guidelines.
25 When we talk about effects monitoring, we are normally

1 talking about measuring whether or not there are
2 potentially significant negative or positive effects
3 from timber management.

4 The context in which we are using impact
5 here though relates basically to whether we are talking
6 about a provincial focus for the program or a local
7 focus for the program and is meant to apply here that
8 when our staff -- our field staff, our forest
9 technicians, our conservation officers, our fish and
10 wildlife technicians, lands technicians or parks
11 technicians are in the field they specifically are
12 looking for observable effects that may have been
13 caused by timber management relative to prescriptions
14 that have been applied to protect against some effect.

15 Q. Thank you.

16 MR. FREIDIN: And also, Mr. Chairman, I
17 should just advise that at page 189 of the
18 Environmental Assessment Document there is reference to
19 information documents.

20 Q. And the information documents, Mr.
21 Straight, I understand have now been called in this
22 particular Figure 4 resource and environmental manuals.
23 They are one in the same thing?

24 MR. SCOTT: A. That's correct.

25 The last group, if you will, of written

1 material or written direction which the Ministry
2 provides are those construction and operational manuals
3 basically which have been designed to assist staff in
4 meeting environmentally sound construction and
5 operating standards when they conduct those operational
6 types of activities that are required in timber
7 management.

8 Basically speaking, we are looking at
9 five manuals which essentially deal with three
10 different activities. We have in terms of road access
11 in construction a document called Resource Access Roads
12 Policy and Implementation Strategies and Guidelines.
13 We have another document called Construction and
14 Mitigation Handbook for MNR Class EA Projects, and a
15 third document which has recently been prepared and
16 attempts to summarize and amalgamate all of the current
17 science -- engineering and resource science into one
18 document called Environmental Guidelines for Access
19 Roads and Water Crossings.

20 And the basic distinction between those
21 three roads documents are that, that essentially the
22 first one I referred to, the Implementation Strategies
23 and Guidelines deals in many ways with MNR's own
24 internal housekeeping items, administrative items for
25 handling our own road construction activity, how the

1 roads are administered, how they hshould be planned,
2 generally constructed, reconstructed, maintenance
3 requirements, how to implement use control strategies,
4 how to deal with access management in general -- well,
5 specifically, for the most part, internal to our own
6 operations.

7 Now, the second document the Construction
8 and Mitigation Handbook for MNR Class EA Projects was
9 put in place to deal with potential environmental
10 effects for a number of MNR activities including things
11 like access points, docks, roads, dams, dykes, ponds
12 and a number of other small activities, but which MNR
13 conduct.

14 The third document that I referenced is
15 probably the most complete reference that deals with
16 protecting -- mechanisms to protect the environment
17 while undertaking road construction and water
18 crossings. And this particular one will be discussed
19 in some depth by Mr. Adamson when he talks to you about
20 access in Panel 14.

21 The remaining two construction or
22 operational manuals deal with Aerial Spraying for
23 Forest Management, an Operational Manual which again
24 will be discussed in some detail in Panel 13. As well,
25 the Prescribed Burning Manual will be discussed by Mr.

1 Elliott in Panel 11. And basically those two manuals
2 essentially look at the details from a planning through
3 to a completion stage and the very specific types of
4 operational controls and planning features and
5 mechanisms that need to be covered and will be dealt
6 with in depth in future panels.

7 And that essentially provides a summary
8 very quick of the kinds of implementation manuals that
9 the Ministry of Natural Resources provides to staff to
10 assist in making decisions at the local level.

11 Q. Just a couple of questions, Mr.
12 Straight. What is a tradeoff decision?

13 MR. STRAIGHT: A. A tradeoff decision I
14 would consider is one that must be made when two values
15 must be -- are basically at issue in a decision and in
16 going in one course of action or another, there is a
17 potential for a negative effect on one or the other and
18 you have to make a decision as to which way to go.
19 There is no way of providing total protection for both
20 of the values.

21 Q. In the context of making those kinds
22 of decisions, can you advise what relative weights or
23 importance are attached to the values which are the
24 subject of a provincial guideline as opposed to a value
25 which is not the subject of a provincial guideline?

1 A. I would try and clarify that with two
2 observations. First of all, we do recognize that the
3 values protected by provincial guidelines are indeed
4 very important from a broad consideration of the area
5 of the undertaking, and that is one of the reasons we
6 develop provincial guidelines and provided a bit of
7 structure in terms of dealing with them.

8 When you deal though at the level of
9 timber management planning at the very local level, it
10 does not become a case of saying a provincial value is
11 any more or less important than another value which may
12 be identified. And, if I could, I will perhaps give
13 you some examples.

14 If you look at fisheries, for example,
15 there are obviously varying degrees of value; both fish
16 habitat that exist anywhere from a warm water stream
17 which may be a small even intermittent one which
18 basically provides habitat for minnows between two
19 beaver ponds, compared to a major spawning shoal on a
20 fishery like Lake of the Woods which basically has a
21 socio-economic -- an economic impact on the Province of
22 Ontario probably in the order of \$20-million or so.

23 So there is an extreme range of values
24 even protected by the guidelines. So the issue becomes
25 that the area of concern planning process, if you will,

1 is the one that would look at and weigh the relative
2 values of the two specific values that you were dealing
3 with at that level of planning.

4 Q. Thank you.

5 MR. FREIDIN: Mr. Chairman, I am going to
6 start Dr. McNamee. He has indicated that he thinks
7 that he can probably give his evidence in two hours or
8 thereabouts and he feels that it is important that we
9 go -- we hear all of his evidence in sort of one chunk,
10 so if that is okay, I would like to start that right
11 now.

12 THE CHAIRMAN: Let's go for it.

13 MR. FREIDIN: Okay.

14 DR. McNAMEE: Most of my talk is going to
15 be up here with the overheads.

16 As was mentioned in an earlier part of
17 this afternoon, what I am going to talk about is
18 largely a description of the approach and the process
19 we used in designing the effects monitoring program and
20 I believe that the actual details of the monitoring
21 program itself will be discussed and raised in evidence
22 in Panel 16.

23 MR. FREIDIN: Mr. Chairman, Dr. McNamee
24 is going to be showing a number of overheads. I hadn't
25 determined sort of in advance which ones might or might

1 not be exhibits, so I will be thinking about that as we
2 go along and perhaps I would ask you for your
3 assistance in that regard.

4 MRS. KOVEN: Are these contained...

5 THE CHAIRMAN: Sorry. Are any of them in
6 the exhibit we already have?

7 MR. FREIDIN: No.

8 DR. McNAMEE: There are some although
9 they are not shown in the exact same way.

10 Okay. Our firm was awarded a contract by
11 MNR in 1986 to assist MNR in the design of an effects
12 monitoring program which would help to assess the
13 adequacy of the timber management guidelines.

14 One of the specifications in the contract
15 was that we develop an effects monitoring program
16 within the timber management planning process for
17 tourism, fish habitat and moose habitat.

18 Now, when we began this whole effort, we
19 observed a number of fairly important points in
20 relation to the problem at hand. I will just sort of
21 go over those briefly now. The first was largely a
22 multi-resource one, a problem itself, in the sense that
23 we had to think about effects on more than one
24 resource.

25 Point No. 2 is that the problem was, from

1 our perspective, largely a technical one, okay, and it
2 was: Given that timber management is going to occur
3 and given that the timber management guidelines are
4 going to be applied, then what is the best type of
5 monitoring that will ensure that the guidelines do work
6 or do not work, okay.

7 Another observation, a fairly obvious one,
8 is that the problem with which we were faced involved
9 thinking and trying to predict, I guess, the behaviour
10 of natural resources and this raised in our minds two
11 fairly important issues. The first issue, complexity,
12 in the sense that if you take a look at what is out
13 there there are a wide range of resource values of
14 interest, there are a great number of interactions and
15 feedbacks. This in turn raises -- implies that there
16 is probably a great, a large amount of serious attitude
17 about those interactions and what the effects of timber
18 management actions might be.

19 Another observation was that whatever
20 knowledge and understanding existed about timber
21 management effects was probably not organized in a way
22 that could lend itself to a fairly good examination of
23 what we did know and what we did not know about those
24 impacts.

25 It is also -- the last observation was

1 one of scope. It is entirely possible that the timber
2 management guidelines at that point did not deal with
3 all of the timber management -- all of the possible
4 timber management effects on tourism, fish and moose
5 and that the scope of the exercises would have to be
6 expanded in a way that would allow us to identify those
7 other effects.

8 One other point, that there were probably
9 going to be a number of different technical
10 perspectives on what the important and -- what the
11 extent of timber management effects might be and that
12 it was important to bring to bear on the whole exercise
13 as many of those different perspectives as we could.
14 So with those observations in mind, we agreed that the
15 approach that we had to take had to be one that did a
16 number of things.

17 One, it had to be firmly based on trying
18 to, as best as possible, predict what the effects of
19 timber management might be. It had to clearly define
20 and describe the important -- excuse me, clearly define
21 and describe those timber management effects. It had
22 to integrate the knowledge and the understanding of a
23 large range of technical experts. It had to provide a
24 way to examine their knowledge and understanding in a
25 highly systematic way. It had to identify the key

1 unknowns both in terms of the effects -- both in terms
2 of what the effects of timber management might be and
3 in terms of how effective the guidelines might be in
4 being able to deal with those effects.

5 So the approach we used and the approach
6 which I will describe to you for the rest of the
7 afternoon is an approach that has been used a number of
8 times in a fairly wide range of issues, and I will just
9 briefly describe a few of those right now, just to give
10 everybody a sense of the range of issues and so on to
11 which this approach has been used.

12 It has been used, for example, to design
13 a research program to examine the -- to assist the U.S.
14 Forest Service in the northeastern U.S. to help them
15 better understand how to manage gypsy moth. It has
16 been used also in the northeastern U.S. to design a
17 research program to look at the effects of atmosphere
18 pollutants such as ozone and so on on the high altitude
19 spruce fir forest in the northeastern states.

20 The approach has been used to help design
21 alternate fish production and fish harvest schemes for
22 the West Coast salmon stocks. A bit closer to home, it
23 has been used extensively by Ontario Hydro in designing
24 for them a number of effects monitoring programs to
25 look at the -- to help Ontario Hydro understand what

1 the effects of their power generating stations might
2 be. It has been used for Pickering B, Bruce B and
3 Jackfish as well.

4 And it has also been used by Indian
5 Affairs to design an effects -- a series of effects
6 monitoring programs to help them better understand
7 effects of offshore oil drilling in the Arctic. So
8 those are just some examples of where the approach has
9 been used.

10 A key point which I want to make, and it
11 is worth bearing in mind, is that any approach or any
12 specific kind of approach would have worked as long as
13 it had these particular attributes here which I
14 explained earlier; that is, it had to be based on being
15 able to -- it had to be based on trying to predict
16 effects, it had to explicitly describe what those
17 effects were, it had to integrate knowledge, it had to
18 highlight or sort of bring out what the key unknowns
19 were. Any approach, as long as it had those particular
20 attributes which I have talked about, would have
21 worked.

22 Q. Dr. McNamee, one of the items that
23 was listed on the last overhead was sort and screen
24 knowledge. Could you explain what you meant or what
25 you mean by that?

1 A. Sort and screen is there because when
2 people come to workshops of this sort they bring a lot
3 of understanding about how moose behave and how fish
4 spawn and things of that sort. Sort and screen simply
5 means taking that larger body of knowledge and
6 screening out and extracting that part of that body of
7 knowledge which is most useful in terms of being able
8 to understand and assess effects.

9 Now, this approach revolves around the
10 development and evaluation of a model of the effects of
11 timber management actions on those resource values.

12 As I go through the rest of my talk I
13 will describe more specifically the type of model that
14 we used, but the basic steps in the approach are here.
15 I must say that I am going to perhaps introduce a
16 number of words and terms here which, as I go through
17 it, I will explain what those specific terms mean,
18 okay.

19 These are the basic steps: One is
20 defining what the timber management actions are; step
21 No. 2 is defining what are the important measures of
22 the resources of interest; step No. 3, trying to
23 describe as clearly as possible the spacial -- excuse
24 me, the way in which these timber management actions
25 affect these resource values in space; step No. 4,

1 defining the way in which these timber management
2 actions affect these resource values over time,
3 dividing the task of building this model into a number
4 of sub-models, explicitly defining what the
5 interactions between each of those sub-models are;
6 extracting from the model that has been built - what we
7 call hypotheses of effect - examining and evaluating
8 those hypotheses of effect and, based on that, the last
9 step is trying to specify as best as possible what
10 kinds of effects monitoring need to be done. I will go
11 through each of those steps in turn.

12 I must say also that the way that the
13 project was run was extremely important as well. The
14 project revolved around three extensive workshops at
15 which all the technical experts were involved. These
16 were -- we allow between four and six weeks inbetween
17 each of them to do a number of things: To allow the
18 experts who we had involved in the project to reflect
19 on what had happened to prepare for the next workshop
20 and to invite other experts to the workshops to fill
21 particular holes in the expertise.

22 I also want to say what our specific role
23 was in this whole effort. We did not bring subject
24 matter expertise to that project at all. Rather as was
25 described earlier, we brought expertise in natural

1 resource modelling, we brought practical experience in
2 assisting a large number of groups with problems of the
3 same sort, and we brought expertise in being able to
4 run workshops as well.

5 The whole project was started with a
6 two-day scoping meeting very early on.

7 Q. Dr. McNamee --

8 A. Yes.

9 Q. --if I could just ask you one
10 question about the role of your company, you indicated
11 that you didn't bring any particular subject matter
12 expertise to the project.

13 When you read the reports that were
14 prepared by you or prepared by your company and, in
15 particular, Exhibit 381 which is the document: Effects
16 Monitoring for Resource Protection Guidelines in
17 Ontario, are the conclusions and recommendations in
18 that document the conclusions and recommendations of
19 your company?

20 A. No, they are those of the experts who
21 were involved in the workshops all the way through.

22 Q. Thank you.

23 A. Now, at this two-day scoping meeting
24 at the start, the objectives of this meeting were to
25 basically agree on the scope of the whole effort,

1 conduct a dry run of this first workshop and basically
2 go through as many of these first steps in a dry run as
3 we could.

4 This was done solely for the purpose of
5 deciding what kinds of technical expertise we had to
6 involve, and some points I want to make here about what
7 was resolved at that scoping meeting in terms of the
8 scope of the whole effort.

9 One, that it was not to be a tradeoff --
10 it was not to be a project in which resource tradeoffs
11 were to be examined at all. Now, by tradeoff, I mean
12 an examination of the gains and/or losses, in
13 particular, resources that occur under gains or losses
14 of other resources.

15 It was reaffirmed at that meeting that we
16 would concentrate on designing an effects monitoring
17 program only. It was also reaffirmed that we are going
18 to look at timber management effects on three resource
19 values only: Tourism, fish habitat and moose habitat.

20 It was reaffirmed that effects other than
21 those -- excuse me, the project would look at and
22 evaluate effects other than those which are included in
23 those guidelines, but that those effects had to be
24 effects on those three resources and that we would
25 use -- MNR would use the results of the project as a

1 way to assess how, based on the best current
2 understanding, how valid or how adequate the guidelines
3 were to that point, okay.

4 We involved about -- between 48 and 50
5 experts throughout the exercise and they brought a
6 large range of expertise. For example, we had tourist
7 operators, moose biologists, foresters, a wide range of
8 expertise that we used.

9 MRS. KOVEN: Excuse me, Dr. McNamee.

10 DR. McNAMEE: Yes?

11 MRS. KOVEN: These were all members of
12 the Ministry?

13 DR. McNAMEE: No, no. We did not --
14 excuse me, we did not restrict ourselves to any one
15 agency or any one group. We said: Okay, based on our
16 trying to assess what kinds of technical expertise we
17 had to have, these are the kinds of expertise we need
18 and then we asked the question: Well, who is out there
19 and these experts were not all MNR people.

20 MR. FREIDIN: Q. Could you just give a
21 brief example of the areas or groups that you made and
22 pulled expertise from?

23 DR. McNAMEE: A. Examples of the groups?

24 Q. Well, examples of non-MNR people that
25 were involved?

1 A. I'm sorry, okay. We had people from
2 MOE, we had people from OFAH, we had people from OFIA,
3 we had people from the AFO and a wide -- and NOTOA as
4 well and I think a number of other agencies and groups.
5 It is important to bear in mind though that we went out
6 and got the kind of technical expertise we had to have.
7 That was our most important task on our list.

8 Okay. Many of the first -- many of these
9 steps, actually these down to sub-modell interactions
10 were accomplished in the first workshop. With these
11 experts at this first workshop we developed the
12 structure, okay, of the ESSA model and described, as
13 best as possible, the rules for change which were going
14 to be included in the model.

15 I want to take a little step back here
16 and describe what we mean by model. I want to make a
17 number of very important points here that as we --
18 because we used the building of a model and modelling
19 in a very particular way. The model we built basically
20 predicted the effects of timber management actions on
21 these three resources of interest over time and space,
22 okay.

23 And the model was used to provide insight
24 into questions such as: What will happen to these
25 resources of interest if these particular combinations

1 of timber management actions are done? How much of it
2 will happen, how soon? How long will the effects last;
3 will they last for a short period of time or will they
4 last for a long period of time? Will they occur in a
5 fairly small area, will they occur over a fairly large
6 area - again, using the model to provide insight into
7 questions of that sort - and how did those kinds of
8 effects compare with other mixes of timber management
9 actions.

10 Now, the model did prove the effects,
11 there is no question of that, but the key question and
12 the key issue is the degree of accuracy that these
13 experts were able to have in what those predictions
14 were.

15 You recall that I said earlier we are
16 dealing with natural resource systems which are very
17 complex and not at all well understood and if the real
18 world is complex and hard to understand and if we are
19 uncertain about what the effects of timber management
20 are, then it is safe to say that also about any model
21 that we might actually build.

22 So the key point is that the model did
23 predict, but the more important use of the model was to
24 help people assess how certain that they were of those.
25 Again, so why would you build a model of this sort when

1 you feel that whatever predictions it would make for
2 you would be so uncertain.

3 We went through the process of building a
4 model of this sort and it was a process of going
5 through the building of the model which forced these
6 experts to explicitly predict as best as possible what
7 the timber management effects were and to closely and
8 as objectively as possible examine how -- what the key
9 uncertainties were.

10 The process of building that model forced
11 these experts to be as explicit as possible about what
12 their hypotheses of how and to what extent the effects
13 of timber management actions upon those resource values
14 might be and the process of building the model was used
15 to promote a common technical understanding as to what
16 the key effects might be and how uncertain we were.

17 Q. Would you tell me, Dr. McNamee, why
18 an important part of the process was to identify
19 uncertainties?

20 A. It was important to do that to answer
21 this - I am trying to think of the best way to answer
22 this - because the aim of any effects monitoring
23 program is to resolve as best as possible what the key
24 uncertainties are, that is that whole key, because when
25 you build and do an effects monitoring program you are

1 basically trying to resolve and -- to resolve unknowns.

2 Okay. So in building this model we have
3 to go through these particular steps here and I will
4 now describe to you the results of each of these steps
5 in the process.

6 These were the timber management actions
7 which were included. I won't go through each of them
8 here but just note that on this overhead they are
9 divided into a number of groups. In referring these
10 back to the type of timber management actions that are
11 included in the EA itself, the EA describes timber
12 management actions for harvest, access, renewal and
13 maintenance. In our effort we grouped the renewal
14 actions -- excuse me not grouped, but divided the
15 renewal actions into these two groups here, okay. So
16 this is renewal and this is maintenance down here.

17 THE CHAIRMAN: Mr. Freidin, where these
18 are referenced in the report, can you advise the Board
19 where they are found, if they are?

20 MR. FREIDIN: As best I can, yes.

21 DR. MCNAMEE: This list of timber
22 management actions is described in the March, '88
23 report on page 9. The effects -- the key point here is
24 that the effects of all of these timber management
25 actions were looked at.

1 Indicators of the resources; not
2 surprisingly we had three groups. These are found on
3 page 11 of the March, '88 report: Fish, tourism and
4 moose. It was interesting to note that although the
5 timber management guidelines for fish and moose are
6 explicitly written - my sense, that they were written
7 for the protection of resource habitat - for those two
8 groups fish and moose, the experts in the project felt
9 it was important to be able to predict and measure
10 effects on the resource values themselves. So, as a
11 result, under here you do not see how much moose
12 habitat there is, but basically how many moose there
13 are.

14 Okay, so far so good. The process was to
15 this point fairly straightforward, but it got more
16 interesting when we had to define space. The effects
17 of timber management are probably not going to occur
18 equally everywhere and the reason for this is because
19 the dynamics of those different resources of interest
20 operate at different spacial scales and I will
21 briefly - as briefly as I can - describe the spacial
22 structure that we used in the model just to show this
23 point and to hopefully convey some of the ideas that I
24 described earlier.

25 Okay. We had to choose an area the size

1 of which was large enough to include the dynamics of
2 the resources of interest and for the purposes of
3 building the model we actually chose an actual area,
4 the Spruce Falls area here. These are roads here and
5 lakes and streams and so on.

6 Now, the people at the workshops said
7 that the dynamics -- let me take it one step back. It
8 became obvious fairly early on that we would have to
9 look at the water as well only as it -- as some of the
10 timber management effects on some or all of the
11 resource values of interest occur through the water
12 itself.

13 Okay. We had to look at the dynamics of
14 water, tourism and fish. It was best handled on a
15 watershed scale, okay. So we then divided up the area
16 into, in this case, four of these. Each of these units
17 of land fed into one of these -- one reach of stream.

18 Okay. Now, this is the spacial structure
19 for moose that the people involved in the project said
20 we had to have, said that moose need a number of
21 different types of habitat that are fairly close to
22 each other in space. So we had to adopt a more local
23 review, okay, of this area in order to properly examine
24 timber management impacts on moose, but the whole range
25 of moose, they said, was large enough that we had to

1 look at these local effects over this large area.

2 Okay. So there we have got two spacial
3 scales. It gets even more interesting. This is our
4 area here. In order to be able to look at the dynamics
5 of how stands grow and how wood grows, we had to divide
6 up one of these cells which we had built for moose into
7 a number of even smaller areas or stands.

8 Each of these had a more or less
9 different mix of species, soil, slope and things of
10 that sort. As well, the sort of year-to-year, the
11 day-to-day operation of timber management occurs at
12 this scale as well. But in terms of having to schedule
13 harvest over an extended period of time, we also had to
14 look over this larger area as well.

15 The point is that one must think about
16 timber management effects in space very differently for
17 each resource value of interest.

18 MR. FREIDIN: Q. Dr. McNamee, before you
19 started on showing those overlays, you made a comment
20 that effects won't occur equally everywhere. Could you
21 advise me as to whether these affects would,
22 notwithstanding that, bear any similarity in terms of
23 how they occur everywhere?

24 DR. McNAMEE: A. Okay. I think it is
25 probably reasonable that, in general, if you are

1 looking at timber management effects in different
2 areas, that it is reasonable to assume that the
3 direction of the effect would be the same, the pathway
4 of -- the pathways of effect would be the same and the
5 route of importance of different effects would be the
6 same as well.

7 Q. Could you just give an example of
8 that, of these three similarities in terms of direction
9 of effect, pathway of effects and the relative
10 importance of different effects?

11 A. As an example, if -- it is reasonable
12 to assume that if one knows that timber management
13 effects are going to increase a resource value of
14 interest or decrease a resource value of interest, that
15 that statement can probably be made everywhere, that
16 the reasons for that increase or decrease occurring
17 probably holds as well and that if you have a number of
18 different ways in which timber management may affect a
19 resource -- affect that population of moose, that the
20 important effects out of all of those are going to
21 remain important effects.

22 Q. Okay. Now, earlier in your evidence
23 you made reference to the workshop where in fact you
24 started to develop this model.

25 A. Yes.

1 Q. And you indicated that at that
2 workshop you developed rules for change. Could you
3 describe what you mean by rules of change, or rules for
4 change, I think.

5 A. For that I will need this chart. How
6 far do you want me to go?

7 By way of example, if one looks at a huge
8 number of moose as our indicator of the resource value
9 of interest over time and we have observed -- here is
10 where we are now - we have observed that the numbers of
11 moose in our area of interest from an outline of this
12 up until that point in time.

13 Q. So you are indicating that it has
14 gone up slightly?

15 A. On its way up. That the model we
16 built didn't simply look at what had happened in the
17 past and said: Well, we are going to project out into
18 the future simply what has happened in the past. If
19 you did that, you would get something like this.

20 What we did was, okay, let's take moose,
21 what are the basic rules by which moose populations can
22 be expected to change: Birth, death, animals we move
23 into an area and out of an area, things of that sort,
24 and let's try to describe those as best as we can.

25 So, for example, one of them might be

1 number - I hope there are no people here who are
2 experts on moose - but, for example, number of moose
3 calves born is equal to the maximum possible number of
4 moose calves born multiplied by the per cent of fat on
5 the cows in the spring time, okay. Then that is a rule
6 of change, okay.

7 Then we can start saying: Well, how
8 might the per cent of fat content on a moose change as
9 well. Well, it varies with -- okay, this varies with
10 habitat structure, food, and a whole series of things.
11 So building up rules for change of this sort. The
12 reason we built the model with these kinds of rules
13 rather than these kinds of rules here is that --

14 Q. You used the rules which you have
15 described at the bottom part of this sketch?

16 A. Sorry?

17 Q. You have used the rules...

18 A. We have used these rules here at the
19 bottom.

20 Q. All right.

21 A. These kinds of rules rather than
22 these kinds of rules because these kinds of rules here
23 basically make as explicit as possible the important
24 cause/effect relationships between timber management
25 actions which may change habitats for moose.

1 Q. And I understand that these rules of
2 change, there are a number of rules of change in
3 relation to all of the various -- the three resource
4 values that you are looking at?

5 A. Yes.

6 Q. And could you advise as to the
7 application of those rules of change in certain -- or
8 in different locations. In the area of the
9 undertaking, would they be the same or would they be
10 different?

11 A. It is reasonable to expect that these
12 rules would be -- that would be a reasonable way to
13 both represent the dynamics of moose and the effects of
14 timber management on moose wherever you were.

15 Q. Thank you.

16 THE CHAIRMAN: Do you want to put that
17 in, Mr. Freidin?

18 MR. FREIDIN: Yes, please.

19 THE CHAIRMAN: Exhibit 385.

20 What do you want to call it?

21 MR. FREIDIN: If the rules of change
22 would remain the same -- Oh, I am sorry. What do you
23 want to call your drawing here, Dr. McNamee, Rules of
24 Change?

25 DR. McNAMEE: Example of a rule for

1 change.

2 ---EXHIBIT NO. 385: Hand-drawn diagram of an example
3 of a rule of change.

4 MR. FREIDIN: Q. If the rules of change
5 wouldn't differ from one location to another, what
6 would cause -- what would differ from one area to
7 another?

8 DR. MCNAMEE: A. Things such as --
9 things that are somewhat, I suppose, external to the
10 model such as how much snow falls, are we on steep
11 slopes, things of that sort, how much moose "habitat"
12 is in the area, but things of that sort.

13 But once you have defined those kinds of
14 things for your model, the rules for change can then be
15 used to both -- to examine the effects of timber
16 management actions on the resources of interest.

17 Okay. Sub-models. We basically had
18 five -- no, I'm sorry, let's go back, time, excuse me.
19 I'm getting ahead of myself here.

20 The same arguments that I have described
21 for space can be made for time as well, that impacts
22 don't occur equally, don't occur to the same extent
23 over time and, in this particular case, the timber
24 sub-model operated -- was felt that it needed to
25 operate on an annual time step, we needed a seasonal

1 time step to look at the effects of timber management
2 on tourism, fish and moose and, in order to be able to
3 properly look at the changes in amounts of water and
4 things of that sort, an even finer scale of time would
5 be needed, that of one day. Okay.

6 And it was also felt that in order to be
7 able to look at some of the longer term effects -- of
8 some potential longer term effects, that it would be
9 necessary to predict out between 50 and 100 years as
10 well. Now, talking about predicting those changes over
11 a spacial scheme of this sort.

12 Sub-models was the next step and not
13 surprising we have five. As I mentioned earlier,
14 water, timber, tourism, fish and moose as well. Now,
15 these sub-models don't operate independently of each
16 other, okay. And the next step was to define what the
17 key interactions between these sub-models were.

18 Going back to this diagram here: What,
19 for example, would the moose sub-model have to know
20 from the timber sub-model in order to be able to use
21 changes in amounts of food and so on to allow it to
22 predict changes in numbers of moose. And this here
23 shows what the key sub-model interactions are.

24 For example, the moose model, in order to
25 be able to predict changes in numbers of moose over

1 time and space, had to obtain from the timber sub-model
2 the amount of food, cover, where the access roads were
3 and an index of habitat edge and also required from the
4 tourism sub-model, how much hunter effort there would
5 have to be. So we had to basically specify all of
6 these key sub-model interactions.

7 Once that was done we could then build
8 the model.

9 MR. FREIDIN: Q. Dr. McNamee?

10 A. Yes.

11 Q. Before you go on, Dr. McNamee, am I
12 correct that page 14 of Exhibit No.--

13 A. Thank you.

14 Q. --381 addresses the interactions--

15 A. Yes, you are right.

16 Q. --of these sub-models?

17 A. Absolutely. Yes, thank you.

18 Q. And if you could just turn to that
19 page and just indicate how one would read that
20 particular chart.

21 A. One reads that chart in the following
22 way. Each of the five sub-models is listed along the
23 top and down on the side as well.

24 Any box in this chart lists what
25 information had to be provided to the sub-model listed

1 on the top from the sub-model listed on the side.

2 Okay. So, for example, let's use the
3 example we just went through of moose. That would be
4 the box -- in terms of what the moose sub-model needed
5 from the timber sub-model, that is the box under moose
6 on the top and across from forestry on the side.

7 And from the tourism sub-model that is
8 under the moose column on the top across from the
9 tourism sub-model on the bottom, and bingo. Okay.
10 Then the experts were able to build the model.

11 I just want to give you some flavor as to
12 what went into these rules for change here. When
13 things were going extremely well we could use actual
14 data that the experts have. Where that is not -- where
15 that did not exist, we relied on the practical
16 experience that the experts brought to the workshop in
17 their areas of expertise and when that got -- when that
18 wouldn't do, or we drew the line -- the understanding
19 they had about natural resource systems of this sort.

20 Okay. Once the sub-models were built,
21 they were linked to each other with the interactions
22 that were specified in here and then once the entire
23 model was built it was used not to make any certain
24 statements about what the effects of timber management
25 are or might be, but to more specifically highlight

1 what the key unknowns are -- or excuse me, were and we
2 did that by doing a large number of runs of the model
3 basically with the different mixes of these timber
4 management actions.

5 For example, we did runs where we had no
6 timber management actions at all. We looked at effects
7 on resource values when timber management was done
8 without timber management guidelines in place, with the
9 timber management guidelines in place and looked at the
10 importance of different kinds of timber management
11 effects on the resource values of interest such as the
12 relative importance, for example, on moose, changes in
13 their habitat versus changes in their -- in a hunting
14 effort that might occur as access roads were built.

15 I just want to relate a specific example
16 of the way in which the model was used to hopefully
17 give people more of an insight as to how it was
18 actually used and it relates to the effects of timber
19 management on moose.

20 What we found, for example, is that in
21 any one year the spacial scale in relation to the whole
22 range of the animal on which timber management actions
23 occur is very small, okay. In any one year, it was
24 operating on one or more -- one or a few of these cells
25 here.

1 So if we look at timber management
2 effects on just those cells, we could see large effects
3 because, not suprisingly, the changes in the habitat
4 that were being done as a result of those timber
5 management actions on those areas was extreme. But
6 when we looked at what was happening to the moose
7 population as a whole over the entire area, the effect
8 was much smaller and there were essentially sort of two
9 schools of thought; one that timber management effects
10 on moose were going to be extremely large and the
11 Ministry thought the same thing and that the timber
12 management effects were going to be very small.

13 The model was used to show that both of
14 those groups -- what both of those two groups were
15 saying that both right and wrong, that it was important
16 to think about what spacial scale. Okay. So we used
17 the model in that way. We did not use the model to say
18 this is what the effects of timber management actions
19 on moose would be.

20 Okay. This is one version of the model
21 which I have described to you here. We essentially --
22 after the model was built and we had examined it as
23 much as we were able to, we took a step back from the
24 model and said: Okay, what have we learned about what
25 the important -- or about what the sweep of timber

1 management effects are. And, again, I call your
2 attention back to these five sub-models; fish, water,
3 tourism, moose and timber as well.

4 So we took a step back and extracted from
5 the model, from these rules for change here, the basic
6 cause/effect relationships which we have included in
7 the model. We basically extracted the basic form, the
8 basic rules for the model and put them into a flow
9 diagram of this sort here. Okay. This is fish, water,
10 tourism and moose. You can see the major steps and how
11 all of these sub-models interact overlaid on top of
12 that.

13 MR. FREIDIN: Perhaps we could mark the
14 last chart as an exhibit, Mr. Chairman.

15 DR. McNAMEE: I would prefer that this
16 one be marked and for the reason that this contains the
17 ways in which timber management actions affect these
18 resources.

19 MR. FREIDIN: All right.

20 THE CHAIRMAN: Exhibit 386. You will
21 provide a hard copy of that at some point?

22 MR. FREIDIN: Yes.

23 THE CHAIRMAN: Thank you.

24 ---EXHIBIT NO. 386: Hand-drawn diagram of actual
25 model.

1 THE CHAIRMAN: What do you want to title
2 that, Dr. McNamee?

3 DR. McNAMEE: The actual model. I would
4 also like to point out that this overhead here is the
5 same as page 16 in the March, '88 report, except that
6 the overhead is somewhat easier to understand.

7 MR. FREIDIN: Q. It has the same content
8 as that--

9 A. Identical.

10 Q. --which appears on page 16?

11 A. Yes, identical.

12 Q. It is just demonstrated differently.

13 A. Yes. So this here is the core of the
14 model we built. In order to squeeze everything on the
15 overhead, the stumps refer to harvest, these arches
16 refer to access, these rings refer to renewal and
17 maintenance actions except for the application of
18 pesticides and herbicides. Those are indicated by the
19 triangles here with the P.

20 Once we had this, the other model was not
21 used, it was not used from this point on and the
22 remainder of the project used this version of the model
23 here. This is another equally important point.

24 For your interest -- I am sorry. What
25 this model is, you can see here, is basically a

1 statement of a number of hypotheses of effect -- excuse
2 me, of a number of hypotheses of effect of how timber
3 management actions affect the resources of interest.
4 Okay, that's what this model is.

5 Q. Can you take us through one--

6 A. I would be glad to.

7 Q. --one of those activities and show us
8 how to read that?

9 A. Here is an example hypothesis of
10 effect, okay. This has -- this says that timber
11 harvest and the building of roads is going to have some
12 kind of effect on fisheries and the effect is going to
13 be -- is going to occur in this way here.

14 These timber management actions basically
15 creates sediment inputs to the stream or to the -- yes,
16 to the stream which, in turn, alters the make-up of the
17 spawning areas which, in turn, affects the number of
18 young fish that may be produced out of that area which
19 will, in turn, affect and influence the numbers of fish
20 of that species or that stock.

21 Note that in order to look at this
22 hypothesis of effect here in the proper way, one would
23 have to have experts in forestry, stream flow and
24 fisheries as well. I will give you an another example
25 of hypothesis of effect in this model.

1 This one states that timber harvest will
2 again affect populations of fish through this --
3 through the numbers of young fish that may be produced,
4 primarily through changes in the temperature of the
5 stream, both by influencing flow of that stream and the
6 height of the vegetation at the edge of the stream.

7 Okay. We extracted 36 hypotheses of
8 effect from the model we had built. We grouped them
9 for the purposes of the project into 13 groups and
10 those 13 groups are the 13 hypotheses of effect
11 described in the March, '88 report.

12 As an example, the two hypotheses of
13 effect which we have just gone through are actually
14 part of hypothesis 1 in the March, '88 report which is
15 discussed on page 19 to 39.

16 Q. Perhaps, Dr. McNamee, could you put
17 up the other overheads that you used and describe how
18 they relate to the hypothesis on page 19?

19 A. The first one which -- that isn't
20 this one. The first one is that one here, okay. These
21 timber management actions basically creates sediment
22 inputs to the stream, alter the substraat, in turn
23 spawning, which then influences fish populations.

24 That one -- and this diagram here is
25 pathways from these actions here to 1, 3, and 12 and 13

1 as well as 2 -- 1, 2, 3, 12 and 13.

2 The other example I described here,
3 timber harvest having an effect on a temperature of
4 stream which in turn affects populations of fish is
5 again in hypothesis 1 and that is pathways from these
6 actions 6, 7, 8, 9, 12 and 13 as well. Okay.

7 So we grouped for the purposes of the
8 final workshop these 13 -- excuse me, these 36
9 hypotheses of effect into 13 groups just so that you
10 could deal with them and go through them much more
11 easily at the workshop. So these are the 13 groups
12 here: Fish, moose and tourism and these correspond
13 directly to the 13 hypotheses in the March, '88 report.

14 Along with each hypothesis of effect
15 are -- excuse me, a hypotheses of effect contains three
16 elements: A general statement of what the effect is, a
17 flow chart which describes and shows what the pathway
18 of effect is and a statement of each linkage in the
19 pathway of effect as well.

20 I must say that we constructed these
21 hypotheses of effect as if the timber management
22 guidelines were not being used at all. In the absence
23 of timber management guidelines, this is what the
24 effects are hypothesized to be.

25 The final major workshop again involving

1 all of the experts, we went through each of those
2 hypotheses of effect link-by-link and described what
3 the known and the unknowns were for each of these
4 linkages in each of these hypothesis of effect.

5 And as with the building of the model, we
6 drew on a lot of evidence. The evidence that we drew
7 from was from work that had been done on the resource
8 value interest here in Ontario, done on the resource
9 value of interest outside of Ontario, done on similar
10 species in Ontario, similar species outside of Ontario.
11 A wide range of evidence was brought to bear for each
12 of these hypotheses of effect and we documented that
13 evidence, brought out and organized that evidence
14 with -- as if the timber management guidelines were not
15 in place, and also as if -- then we asked the question:
16 Well, What kind of evidence do we have or can we bring
17 to bear on how well the timber management guidelines
18 which are in place can actually protect for that
19 effect.

20 Once we had documented as much of the
21 evidence as we were able to, the group were - if they
22 felt it was important to do so based on the evidence -
23 were encouraged to outline ways in which an effects
24 monitoring program might help address and better
25 understand what those -- what the nature of that effect

1 and whether or not the timber management guidelines
2 that were in place could actually in fact deal with
3 that effect.

4 I just want to go through two examples of
5 that, again using the hypotheses of affect which I
6 described earlier. This is the very first one we saw
7 here and it has been extracted from that large diagram.
8 These are the timber management actions, this is the
9 resource value of interest and this is the pathway of
10 effect by which these timber management actions
11 influence that resource value.

12 The conclusions for that are that indeed
13 the effect is -- the effect in the absence of timber
14 management guidelines being used would be a significant
15 effect. The timber management guidelines do address
16 this effect, however, the effectiveness of guidelines
17 in being able to protect for that effect is at present
18 uncertain and, therefore, the group who looked at this
19 effect said: Yes, we need an effects monitoring
20 program for this and if one were to be put in place it
21 should look at both the amount -- magnitude and
22 duration of sediment inputs to streams and the spawning
23 substrait as well in areas where timber management
24 guidelines was being done with the fish habitat
25 guideline being used, and also in areas where timber

1 management would have to be done without the guidelines
2 in place.

3 Q. I understand there is a summary of
4 the hypothesis evaluations in the document which has
5 been marked Exhibit 381?

6 A. Pages 212 to 214 describe the -- are
7 a summary of the major results for each of the
8 hypotheses of effect and the example that we have just
9 been through is the first example on page 212, the first
10 row on page 212.

11 The example which I will go through now
12 is the third row on page 212. Again, this is the
13 statement of the hypotheses of effect and that is in
14 the absence of timber management guidelines being used,
15 timber harvesting to the edge of the shoreline will
16 decrease populations of streams spawning fish by
17 increasing stream temperatures during the spawning and
18 the egg stage.

19 The experts at the workshop -- final
20 workshop stated that in absence of timber management
21 guidelines -- of any timber management guideline being
22 used, there would be insignificant effects and, as a
23 result, the sub-group said that for this particular
24 effect there was no need to do any effects monitoring
25 at all.

1 We went through each of these hypotheses
2 of effect in the same way, okay, and from that built,
3 sort of, the first, sort of, attempt at what an effects
4 monitoring program should do and should include and
5 also need not necessarily be included as well.

6 As a very general summary of what the
7 workshop and the project came up with for the
8 guidelines, as they existed at that time, there were 10
9 effects which were assessed to be not significant based
10 on current understanding, 12 -- excuse me, 14 which in
11 the absence of timber management guidelines would be
12 significant effects, and 12 of which the experts said
13 we are uncertain as to what the effects could be.

14 Of these 10 here, timber management
15 guidelines do not exist for 8 of these 10, and they do
16 exist for 2 of these 10.

17 Of these 14 effects here, timber
18 management guidelines exist for 13 of these 14 effects.
19 The one effect which is not included in the timber
20 management guidelines, the group said, was dealt with
21 and was handled through one of the other programs that
22 MNR has in place.

23 And of the 12 effects that the group said
24 were uncertain in the absence of any timber management
25 guidelines, no timber management guidelines exist for 4

1 of these 12 and 8 -- and the timber management
2 guidelines at that point in time did deal with 8 of
3 these 12 effects.

4 Q. Going on, Dr. McNamee, in your
5 professional opinion whether those conclusions which
6 indicated that all 14 of the significant effects were
7 addressed by guidelines, and that 8 out of 12 of the
8 uncertain effects were addressed by guidelines, and the
9 information contained on the not significant effects,
10 did those conclusions indicate anything to you
11 regarding the Ministry's approach to protecting those
12 three resources of fish habitat, moose habitat and
13 tourism from the potential effects of timber
14 management?

15 A. They indicate to me that by and large
16 that timber management guidelines, as they were written
17 at the time this project was done, addressed the
18 majority of the possible timber management effects. So
19 that is a brief run-through of the approach.

20 We would like to close with a few
21 thoughts. So what should or does MNR do with all this.

22 What MNR should do with this is basically
23 put the effects monitoring program in place to allow us
24 to better evaluate and to better predict what the
25 important timber management effects are and how well or

1 how badly a job the timber management guidelines do in
2 protecting for those effects and uses those results to
3 basically fix the way timber management is done here.
4 Okay.

5 Another point: Take you back,
6 particularly the long period of time over which some of
7 the effects that we are talking about may be expected
8 to occur. It is -- no one should expect that the
9 results of a short-term monitoring program would yield
10 many useful results that would allow us to better
11 understand what the effects of timber management are
12 and how well or how badly the guidelines work, okay.

13 It is very important that one think about
14 effects and do a monitoring program for a fairly
15 extended period of time to better understand what some
16 of the important timber management effects might be.

17 Q. When you say considerable periods of
18 time, Dr. McNamee, what do you have in mind?

19 A. Ten years would be a reasonable
20 amount of time. It is simply not a matter of looking
21 at timber -- at the state of the resource before and
22 the state of the resource after at two points in time,
23 there is a lot more to it.

24 And the last point I will leave you with
25 is that this should not be viewed as a one-shot affair,

1 that if the effects monitoring program is done and put
2 in place, even after that -- even after that program is
3 over and we have improved understanding and we are able
4 to produce and to improve the timber management
5 guidelines that MNR has, there will still be holes in
6 our understanding and that it is simply a matter of
7 making sure that we always -- excuse me, that MNR
8 always assess what the effects of timber management
9 guidelines are so that the guidelines are improved all
10 the way through time.

11 Q. Dr. McNamee, in your evidence you
12 have stated on a number of different occasions that the
13 effects of timber management on the resource values
14 that you were referring to were uncertain, and I would
15 just ask you to explain what you mean by uncertain when
16 you use it in that context?

17 A. What I mean by that is that from a
18 scientific point of view, from a scientific perspective
19 there is uncertainty in the current relativity in
20 predicting how effective and how adequate the timber
21 management guidelines as they now exist are.

22 Q. And what comment can you make in
23 terms of the certainty as to whether the guidelines are
24 addressing those uncertain effects in a reasonable
25 manner?

1 A. I am not sure what you mean by that
2 question.

3 Q. The effects are uncertain from a
4 scientific point of view, what about the knowledge of
5 the direction of those effects, for instance?

6 A. Are you asking whether we know now --
7 whether in general we know that if we take a certain
8 timber management action that we know that we will
9 cause an increase or a decrease in a resource value?

10 Q. Without the guidelines, yes.

11 A. Generally, yes.

12 Q. And the guidelines address those
13 effects in the manner that you described, 14
14 significant effects are addressed by the guidelines?

15 A. Yes.

16 Q. Eight of the uncertain ones are
17 addressed by the guidelines?

18 A. Yes.

19 Q. And the monitoring program which we
20 described in Panel No. 16, is it intended - and perhaps
21 if you can't answer this, maybe Mr. Straight can answer
22 this - whether it is designed to address those areas.

23 A. I am not able to answer that
24 question.

25 Q. Are you able to shed any light on

1 that at this time, Mr. Straight?

2 MR. STRAIGHT: A. The evidence of Panel
3 16 will address all of those specific effects that have
4 been identified through these set of workshops relative
5 to their significance and relative -- significance,
6 uncertainty or not significant, yes, they will, Mr.
7 Freidin.

8 Q. Mr. McNamee, I asked you -- or you
9 gave some evidence about tradeoff analysis earlier in
10 your presentation and you indicated that it was a
11 decision of the scoping workshop that a tradeoff
12 analysis would not in fact be part of this project.

13 Were there any reasons that the group
14 came to that conclusion, that a tradeoff analysis not
15 be part of the project?

16 DR. McNAMEE: A. The specifications of
17 the contract that we had with MNR did not include that,
18 okay, and so we took another check of that at the
19 scoping meeting and we agreed that it was probably not
20 the right -- that doing that, doing a tradeoff analysis
21 in this project would not be the right thing to do for
22 a number of reasons.

23 One, it would dilute the effort that we
24 were going to put into building -- into designing the
25 effects monitoring program itself. Also that the

1 people at the scoping workshop -- at the scoping
2 meeting felt that the effects of timber management
3 actions on the resource values are sufficiently
4 uncertain at the time being that it would be not be
5 worthwhile because one has to know what the effects of
6 timber management actions are first.

7 Q. You indicated that one of the reasons
8 was that doing a tradeoff analysis or attempting to do
9 that would dilute the quality of the project?

10 A. Yes.

11 Q. Can you explain in what way? Why
12 would that be the case?

13 A. It would have meant basically having
14 two major objectives of that whole effort and we -- and
15 the people at the scoping meeting felt that it was best
16 to do one -- to meet one of those well rather than to
17 do two of those not as well.

18 Q. Mr. Straight, from the MNR's
19 perspective, were the results of the workshop as
20 explained by Dr. McNamee of significance in relation to
21 other avenues or methods of protecting certain values
22 from timber management? These are avenues or methods
23 other than the guidelines which were the subject matter
24 of the particular study.

25 MR. STRAIGHT: A. I am sorry, Mr.

1 Freidin, I missed that last part of your question
2 there.

3 Q. I probably dropped the last part of
4 my question. Were the results of the workshops that
5 have been described by Dr. McNamee of significance to
6 the Ministry over and above their -- the part that they
7 play in designing a research project or monitoring
8 project which will be described in Panel 16?

9 A. The results of this process were of a
10 lot of value to MNR, and before I go into a complete
11 answer to that, at the risk of falling on my face
12 again, I would like to try and proceed cautiously
13 towards the overhead.

14 I wanted to take this opportunity to
15 reinforce something that came out earlier in the
16 discussion of the various tools that MNR uses.

17 Now, we mentioned specifically the
18 characteristics of provincial guidelines and with those
19 characteristics we spoke specifically to use of
20 stakeholders to develop -- use of stakeholders in terms
21 of developing the guidelines and providing their input
22 to assist in revising their direction and assessing the
23 adequacy or the direction that the monitoring program
24 should take. And this particular slide probably
25 exemplifies or typifies the point I tried to get across

1 there as best as anything.

2 In terms of the workshop proceedings we
3 went through, we used these technical experts that Dr.
4 McNamee referred to and, in so doing, we used their
5 knowledge as essentially the foundation on which to
6 build a monitoring -- effects and effectiveness
7 monitoring program.

8 Now, once that -- the intent is that once
9 the program gets put into place and as information
10 becomes available to us, we will have better guidelines
11 to use. It is our intent to use those same technical
12 experts, as Dr. McNamee referred to, to assist us in
13 terms of ensuring that the program is heading and is
14 focused -- continues to focus in the right direction
15 relative to all of the effects, relative to all of the
16 areas that it could go, and also to assist us in terms
17 of looking at how we might revise the guidelines if
18 indeed the results of the scientific experiment suggest
19 that there is a need to do that.

20 And, in that case, MNR would take it upon
21 themselves, using that advice, to make decisions on
22 which way we should go.

23 I just wanted to take the opportunity,
24 Mr. Freidin, to not let the benefits of that slide go
25 without reinforcing some of the material we presented

1 earlier.

2 But what the benefits of the exercise has
3 done for us is that in many ways we have been working
4 in the area of developing guidelines for some time now
5 and you are going to hear from John Allen in terms of
6 fish habitat, you are going to hear, to some degree
7 from, Dave Eiler in terms of the moose habitat in
8 particular and it was extremely satisfying and
9 gratifying to know that we could charge individuals of
10 the nature of the job of exploring the broad range of
11 potential effects from timber management and try and
12 do -- through their own efforts, try and synthesize
13 that material, wealth of material into something that
14 was useable in terms of addressing the major and
15 significant effects.

16 And the workshop proceedings have
17 confirmed for us that indeed those staff were able to
18 pick out the important areas and focus the guidelines
19 in the direction that they are in this -- in quite a --
20 basically a fairly exhaustive review by a number of
21 both internal and external experts.

22 The other thing that it serves to
23 strengthen is the degree of satisfaction we feel that
24 our other written direction that we have provided is
25 similarly of the same quality and, of course, a major

1 advantage of the program, as I said - as you alluded to
2 Mr. Freidin - is that it has given us something to
3 focus on in terms of identifying those potential
4 effects which are significant to the degree that we can
5 now develop a practical and a deliverable monitoring
6 program which is in 16.

7 MR. FREIDIN: Thank you. Those are my
8 questions of this panel.

9 THE CHAIRMAN: Thank you, Mr. Freidin.
10 Just before we adjourn just two short questions. Can
11 you advise the Board when Panels 16 and 17 witness
12 statements will be delivered?

13 MR. FREIDIN: They should have been
14 delivered by now.

15 MR. MANDER: Yes, we have got them.

16 MR. FREIDIN: I think they were
17 Purolatored on Friday.

18 THE CHAIRMAN: Okay. Sorry, we have
19 them. And the rest of the parties, I believe, by today
20 are supposed to be submitting statements of issue with
21 respect to Panel 10; is that not correct?

22 MR. FREIDIN: I think I have got them
23 from most of them. I have got a pile of them over
24 here.

25 MR. MANDER: Yes, we have got a pile.

1 THE CHAIRMAN: Okay.

2 MR. FREIDIN: I am just wondering whether
3 we could just canvass some of the people here -- people
4 who are here now, seeing they may not all come back
5 this evening, to find out how long they will be in
6 cross-examination?

7 THE CHAIRMAN: Well, we can certainly
8 ask.

9 Ms. Swenarchuk?

10 MS. SWENARCHUK: Half a day to a day.

11 THE CHAIRMAN: Half a day to a day. And
12 what about --

13 MS. SWENARCHUK: Mr. Edwards is going to
14 go first.

15 THE CHAIRMAN: Mr. Edwards?

16 MR. EDWARDS: It will be about half a
17 day, Mr. Chairman.

18 THE CHAIRMAN: Half a day as well.

19 Mr. Cassidy?

20 MR. CASSIDY: About one hour.

21 THE CHAIRMAN: One hour.

22 Mr. Colborne?

23 MR. COLBORNE: Two hours.

24 THE CHAIRMAN: Mr. Campbell?

25 MR. CAMPBELL: We will put in our usual

1 rough estimate of half a day -- half a day to a day.

2 THE CHAIRMAN: Mr. Williams?

3 MR. WILLIAMS: Same, Mr. Chairman. Half
4 a day to a day.

5 THE CHAIRMAN: Very well. Did I miss
6 anyone?

7 MR. FREIDIN: Mr. Hunter.

8 THE CHAIRMAN: Sorry, what about Mr.
9 Hunter?

10 MR. GIBBONS: Mr. Hunter is expecting to
11 be approximately half a day and he was hoping that he
12 could arrange to do it either Monday or Tuesday of next
13 week.

14 THE CHAIRMAN: Well, I believe he had
15 some discussions with Mr. Mander and he was going to
16 contact other counsel so that we might indicate that we
17 will hear from him at a particular time in order to
18 accomodate his schedule with this panel.

19 Do any of the counsel have any objections
20 to us scheduling Mr. Hunter at a set time? It may mean
21 interrupting somebody else depending on where we are.

22 (No response)

23 Well then, why don't we instruct Mr.
24 Mander to contact Mr. Hunter and we will hear from him
25 next Monday?

1 MR. MANDER: Tuesday.

2 THE CHAIRMAN: Tuesday.

3 MR. MANDER: Tuesday afternoon I think
4 would be convenient.

5 THE CHAIRMAN: All right, Tuesday
6 afternoon.

7 MR. MANDER: Or will that be two days?
8 ---Discussion off the record

9 THE CHAIRMAN: Well, it appears,
10 depending on where counsel are going to be, that we
11 could finish on Monday as opposed to Tuesday with this
12 panel.

13 I think we should schedule, Mr. Mander,
14 Mr. Hunter for Monday.

15 MR. MANDER: Okay, okay.

16 THE CHAIRMAN: Because we don't want to
17 delay it just for his cross-examination if, in fact, we
18 can finish.

19 MR. GIBBONS: Thank you.

20 THE CHAIRMAN: Okay. I think we will
21 adjourn at this point until 6:45, if we might.

22 MS. BLASTORAH: Sorry, Mr. Chairman, just
23 one more point.

24 I spoke to Mr. Mander on the break and I
25 didn't point out that there was an amended statement --

1 or witness statement to the statement of evidence for
2 Panel 8, and Mr. Mander and I have discussed this and
3 he has given me the Exhibit No. 378A for the revised
4 witness statement, 378 being the statement of evidence
5 itself.

6 THE CHAIRMAN: Very well.

7 MS. BLASTORAH: And I have a copy of it
8 here for the official exhibit. (Handed)

9 ---EXHIBIT NO. 378A: Revised witness statement of
10 Panel 8.

11 THE CHAIRMAN: That was December 29th or
12 something?

13 MS. BLASTORAH: 28th.

14 THE CHAIRMAN: 28th. Okay. I think we
15 will now adjourn until a quarter to seven at which time
16 we will commence with the scoping exercise on Panel 9.

17 Thank you.

18 ---Dinner recess taken at 5:20 p.m.

19 ---On resuming at 6:50 p.m.

20 THE CHAIRMAN: Thank you. Be seated.

21 Ladies and gentlemen, the purpose of
22 tonight's session is to try and make some headway in
23 focusing upon the issues in Panel 9 and to try and
24 reach, if possible, some consensus about which issues
25 are and are not in dispute and which issues are likely

1 to be the ones that will take up the time in the oral
2 part of this hearing.

3 Now, Mr. Freidin, it seems to us, having
4 reviewed the statements of issue of both yourself, your
5 client, this is the redrafted one of December 29th,
6 1988, and the various statements of issue put in by the
7 various parties -- and I just might indicate for the
8 record the ones that we have received or at least the
9 ones that I have in front of me at the moment.

10 We have one from Forests for Tomorrow,
11 one from Mosquin Bio Information Limited, one from
12 OFIA/OLMA, one from the Ministry of the Environment,
13 and one from the Ontario Federation of Anglers &
14 Hunters.

15 Mr. Hunter indicated that he does not
16 intend to ask any questions on Panel 9 as does NOTOA
17 and Mr. Colborne's client as well. So I think that
18 that pretty well covers all of the parties who are
19 participating on a full-time basis here.

20 Is there anybody else who is present that
21 thinks that we should be referring to a statement of
22 issues filed by them that I haven't already mentioned?

23 (No response)

24 Very well. Mr. Freidin, it seems to us
25 that looking over the comments that have come in that

1 many aspects of silviculture are going to be dealt with
2 specifically in subsequent panels, particularly Panel
3 10 dealing with harvest and some of the later panels.

4 The two areas that appear to be unique,
5 if I might put it that way, to this panel appear to be
6 the evidence concerning the hydrologic cycle and the
7 nutrient cycle and it is those two areas that it
8 appears to us that most of the other parties are
9 concerned with and it is that evidence upon which most
10 of the other parties wish to cross-examine.

11 And I guess what we are wanting to
12 ascertain at this point is an assurance from you that
13 you not going to be covering, in this panel in terms of
14 silviculture, areas that you are really going to cover
15 in much more detail in the later panels.

16 As you are aware, we have spent a number
17 of hours and a number of different witness panels have
18 dealt with the generalized approach to some of these
19 issues. We have heard from Mr. Armson earlier, we have
20 heard from many of other witnesses earlier and I am not
21 sure it is that productive to deal with silviculture
22 again, not in an abstract sense, but in a generalized
23 sense if, in fact, you are going to deal with many of
24 these issues in a specific sense when you deal with the
25 actual activities.

1 Now, it appears, as I have mentioned,
2 that you have taken the hydrologic cycle and the
3 nutrient cycle more or less out of Panel 10's evidence.
4 It could have been dealt with, in our view, in Panel
5 10, for whatever reason it is not being dealt with at
6 least in any substance in Panel 10 and, therefore, it
7 is properly, I would suggest, in this panel as
8 something completely new and different and something
9 that you want covered.

10 I guess with that preface, how do you
11 feel about those comments from the Board at this point?

12 MR. FREIDIN: I have no problem with the
13 comments from the Board, Mr. Chairman. I think
14 probably that those are the two main areas that will be
15 dealt with.

16 There will be other areas that will be
17 touched on, but I am not intending to repeat or have
18 Mr. Armson deal with evidence that's going to come in
19 later panels. I have taken information from 10 back
20 into 9 because he was already going to deal with sort
21 of three quarters of the evidence in relation to those
22 two cycles and I thought: Well, let's try and deal
23 with it once only and not try to repeat it again in
24 Panel No. 10.

25 Again, my intention is not to take any

1 longer than I have to, and I hope I demonstrated that
2 at least somewhat this afternoon.

3 THE CHAIRMAN: And the Board is
4 appreciative of your efforts this afternoon because
5 obviously you covered the evidence you wanted to cover
6 in a concise amount of time and, I might add, in
7 probably a record time for this hearing so far for a
8 panel.

9 And I know we won't keep at that pace
10 forever with some of the later panels, but certainly
11 Panel 9 also seems to be, to us, a panel of that nature
12 that can be disposed of relatively efficiently and
13 quickly.

14 MR. FREIDIN: I was just looking at the
15 contents of Panel No. 9 which are set out at page 5
16 witness statement for Panel 9.

17 There are certainly two items which are
18 new and only really relate to this particular panel and
19 that is the concept of eco-system, which is the fifth
20 item listed, and assessing the significance of change.

21 MR. MARTEL: What was the second one, Mr.
22 Freidin, please?

23 MR. FREIDIN: Assessing the significance
24 of change, which starts at page 39. You see the
25 hydrologic cycle and nutrient cycles start on pages 17

1 and 31 respectively, and we have the additional
2 information that we are pulling back into this panel
3 from Panel No. 10.

4 And I assume, Mr. Chairman, that the
5 Board has copies of my letter of January the 19th?

6 THE CHAIRMAN: Yes.

7 MR. FREIDIN: So then there is the
8 concept of eco-system at page 12 and assessing the
9 significance of change at page 39. Those are two
10 matters which would not really be dealt with by any
11 other panel.

12 Some of the information on pages 6
13 through 11 are very general. I wouldn't expect to be
14 spending much time or having Mr. Armson spend much time
15 on that.

16 MR. CAMPBELL: Mr. Freidin, what document
17 page numbers are you referring to when you are talking
18 about pages 12 and...

19 MR. FREIDIN: All right. I think
20 probably -- I know what the problem here is. I should
21 be dealing -- I am sorry, I was referring to the page
22 numbers not in the top right-hand corner. Thank you,
23 Mr. Campbell.

24 If we take concept of eco-system it
25 really starts at page 14 -- I am sorry.

1 MR. CAMPBELL: Page 16?

2 MR. FREDIN: Page 16, that's correct,
3 assessing the significance of change starts at page 53
4 of the witness statement. My apologies, Mr. Chairman.

5 There is an additional matter. After we
6 have dealt with the evidence I sort of outlined in
7 Panel No. 9 and in my letter of January the 19th that I
8 would like to address, but perhaps other counsel might
9 want to say something about my comments.

10 THE CHAIRMAN: All right. Do any of the
11 other counsel - perhaps I will just canvass them very
12 quickly - have any comments with respect to the major
13 issues that appear to be the ones that should be
14 covered in this panel?

15 Mr. Freidin has indicated he wants to
16 address in oral evidence to some extent in-chief the
17 aspects of change, the eco-systems on page 16,
18 hydrogeologic cycle and a nutrient cycle and those
19 appear to be to us the major issues.

20 Is there anything else somebody feels
21 should be addressed upon which they want additional
22 elaboration or an indication as to whether or not Mr.
23 Freidin is going to address the issue at all?

24 Mr. Campbell?

25 MR. CAMPBELL: Mr. Chairman, we have

1 identified in our statement two -- I guess it is really
2 one area relating to both paragraphs 6 and 7 and
3 paragraph 18.

4 MNR, in its evidence, has pointed out the
5 similarities between natural disturbances and
6 disturbances resulting from timber management
7 activities. We have asked specifically that there be
8 an enumeration, an expansion which focuses on the
9 differences between the effects that are caused by
10 timber management and the effects which arise from
11 natural disturbances. That's one matter.

12 The other matter in which I would just
13 like to be clear is that in relation to both the
14 nutrient cycle and hydrologic cycle evidence, we have
15 an interest in exploring a question of whether the
16 database that is available to MNR is adequate to enable
17 those principles associated with nutrient cycling,
18 hydrologic cycling and, to some extent, the whole
19 question of the eco-system concept, whether that
20 database is adequate to apply those concepts at the
21 field level when making practical timber management
22 decisions.

23 I rather expect that that part of it,
24 cross-examination on that part of it; that is, how do
25 you apply nutrient cycle information to a particular

1 piece of land to make a particular choice amongst the
2 alternatives that are available to you, may well be
3 dealt with in the individual panels relating to the
4 activities as we move through them, but I am a little
5 unclear as to where we switch from Mr. Armson's
6 evidence to those later panels.

7 We are concerned with this question of
8 what data is required to apply them in a -- those
9 concepts in a practical way and whether, in fact, that
10 data is available at the local level.

11 THE CHAIRMAN: Mr. Freidin, let's deal
12 with two of these questions put forward by Mr.
13 Campbell.

14 Firstly, will you be addressing in this
15 panel any differences caused by timber management and
16 timber management effects and natural effects, or what
17 is your intention?

18 MR. FREIDIN: I think Mr. Armson will be
19 dealing with the -- I guess I hadn't thought of
20 approaching it sort of from the direction that Mr.
21 Campbell comes from, but Mr. Armson will be talking
22 about the effects of timber management on the
23 terrestrial environment but not including wildlife. In
24 other words, he won't be able to in fact indicate what
25 the differences are in terms of effects of timber

1 management on wildlife or on fisheries.

2 What he will be able to do deal with,
3 whether he does it through questions from me or whether
4 he does it through cross-examination from Mr. Campbell,
5 I think we can probably -- properly be asked questions
6 along that line but in relation to the effects on the,
7 you know, the trees and that part of the terrestrial
8 environment.

9 MRS. KOVEN: Excuse me, Mr. Freidin. If
10 I understand Mr. Campbell correctly, he is talking
11 about those kinds of effects, but he is also talking
12 about the philosophy of the Ministry of Natural
13 Resource's view that they see, that in fact the effects
14 of timber management are really no different in, I
15 assume, a qualitative and quantitative fashion than
16 natural disturbances.

17 MR. FREIDIN: I am not sure I would put
18 it quite that way, but I think Mr. Armson will be asked
19 to comment on those similarities and whether he
20 feels -- what his views are in terms of -- or what the
21 significance is in terms of those significance -- I
22 mean, those similarities.

23 MR. MARTEL: Well, would they not come in
24 when they discuss harvesting per se in the other
25 panels?

1 MR. FREIDIN: There are -- they will come
2 up, but Mr. Armson is going to be giving evidence in
3 relation -- when we gives evidence in relation to the
4 nutrient cycle and the hydrologic cycle, that evidence
5 is going to form the basis of things that other
6 panels -- other panels are going to be relying on that
7 evidence. They are going to be saying, you know, they
8 are not going to deal with that so, yes, we are going
9 to be dealing with things in 9 which will be brought up
10 again in Panel 10 but, hopefully, without the detail.

11 THE CHAIRMAN: Well, you won't have to
12 explain what the nutrient cycle is or the hydrologic
13 cycle is having had it explained in this panel?

14 MR. FREIDIN: That's right. And if
15 somebody says: Why do you end up with a change in
16 ground water flow as a result of certain harvesting
17 techniques, and somebody says, it is because A, B or C
18 it will be basically understood because Mr. Armson will
19 have testified about that in Panel 9.

20 THE CHAIRMAN: Now, about taking the
21 database and applying it at the local level for the
22 cycle. Will this be done in relation to the individual
23 activities later on in the later panels?

24 MR. FREIDIN: I am pausing because of the
25 way Mr. Campbell worded it. If I could just have one

1 moment.

2 THE CHAIRMAN: Wouldn't it, Mr. Freidin,
3 be applicable in Panel 15 when you are dealing with
4 planning at the local level?

5 MR. FREIDIN: No, I don't think so. The
6 reason, like I say, I have some hesitancy is that the
7 Ministry's evidence in relation to the database, as I
8 indicated back at the first scoping session, was led in
9 Panel No. 6 in a general way but more particularly in
10 Panel No. 7.

11 It is the sort of information which is
12 available -- if you don't have sufficient information,
13 you have avenues to in fact get additional information.
14 In fact, Panel No. 8 is talking about those sorts of
15 things.

16 All I can say is I will take Mr.
17 Campbell's comments into consideration when I am
18 finalizing Mr. Armson's examination-in-chief, but I
19 cannot really assure you -- I cannot assure Mr.
20 Campbell that I am going to deal with those matters in
21 the level of detail that will give him the answers that
22 he is seeking.

23 I think it is useful for me to know that.
24 I will discuss that with Mr. Armson, but it may well be
25 that we will have to await Mr. Campbell's questioning

1 to get any information or a satisfactory level of
2 information to satisfy Mr. Campbell.

3 MR. CAMPBELL: Well, in case there is any
4 misunderstanding let me be as precise as I can be.

5 We have reviewed the explanations about
6 the nutrient cycle, hydrologic cycle and the question
7 which -- there are really two aspects to the question
8 which arise.

9 First of all, is the database which we
10 have had explained to us to date, is the database
11 adequate across the area of the undertaking to allow
12 nutrient cycle considerations to be fully taken into
13 account in making a decision as to where and when to
14 carry out the activities that are going to be talked
15 about by the later panels.

16 When we get to those panels, we will then
17 move to the second part of our question which is: How
18 in fact, when one is making harvesting decisions, do
19 those nutrient cycle considerations come into play with
20 respect to the choice of location and timing for
21 harvest or any of the other activities.

22 THE CHAIRMAN: Well surely, Mr. Campbell,
23 that question could be put directly to Mr. Armson, at
24 least the first part of the question: Is, in his view,
25 the database adequate across the area of the

1 undertaking and I would assume he could provide some
2 kind of answer in that regard.

3 MR. CAMPBELL: Well and that's why we
4 have indicated that we would be cross-examining on that
5 question and that we basically invited MNR to call
6 further oral evidence on that at the end of which we
7 may have no cross-examination.

8 MR. FREIDIN: Let me try and answer it
9 this way. You have heard some evidence throughout
10 these hearings and perhaps a little bit more this
11 morning -- or this afternoon about silvicultural ground
12 rules and you will see that when you prepare
13 silvicultural ground rules there are descriptions of
14 specific site types, soil conditions where in fact
15 certain recommendations are made in terms of how you
16 might harvest, how you might regenerate those areas.

17 The people in the harvest panel will be
18 able to indicate to you that in certain situations,
19 particularly if questions get asked, here is how they
20 might deal with that or they may need information on a
21 number of other factors. But it is my view or my
22 understanding that the silvicultural guidelines for
23 each of the species that are identified in Panel 8 in
24 fact incorporate within them the principles of nutrient
25 cycling and hydrologic cycling.

1 In other words, for spruce, if it says
2 on this kind of a site you should consider using this
3 kind of equipment or you should be generating this way,
4 that is because on those sites, having regard to -- or
5 having an understanding of the nutrient and hydrologic
6 cycle this is a good thing to consider doing.

7 So it is not as if foresters go out - and
8 I don't believe the evidence will be in 10 that the
9 foresters go out and stop and say: Boy, let's see,
10 what's the information on hydrologic cycle.

11 It is sort of implicit in everything they
12 do, they look at -- they have guidelines and they
13 prepare silvicultural ground rules and...

14 THE CHAIRMAN: Well, Mr. Freidin we hear
15 what you are saying. Without you giving the panel's
16 evidence, perhaps those very questions can be put to
17 Mr. Armson and he may come out with similar answers, or
18 different answers.

19 MR. FREIDIN: It helps me to think out
20 loud, Mr. Chairman.

21 MR. CAMPBELL: Mr. Chairman, I don't want
22 any surprises about this, but we do have a concern, for
23 instance, soil information is one that we have raised
24 among other issues. Our assessment of the database
25 would indicate that there is not proper soils

1 information, for example, uniformly available across
2 the area of the undertaking.

3 You know, there is a simple practical
4 question that arises: What data do you have once -- it
5 is enough to apply those considerations? Secondly, how
6 do you make a decision as to where you are going to
7 harvest and using what techniques with or without that
8 information. The second half, as I say, we rather
9 anticipate will be a little farther down the line.

10 THE CHAIRMAN: Okay. Well, on that basis
11 let us leave this issue, Mr. Campbell, in that Mr.
12 Freidin has heard your concerns, he has a panel coming
13 up who may be able to answers those concerns. If he
14 can't, you can certainly put the questions in
15 cross-examination and if you don't get the answers that
16 you want, then perhaps that's an area you can address
17 in your own case if necessary. But at least he is
18 aware that that issue is one that concerns you.

19 Okay. Mr. Cassidy? As far as your client
20 is concerned.

21 MR. CASSIDY: Perhaps I could just get
22 some clarification from Mr. Freidin on what it is that
23 he intends, as a result of how far we got tonight, to
24 call evidence-in-chief and from what I understand, I am
25 looking at page 5 of the Table of Contents of Mr.

1 Armson's paper.

2 My understanding is that he is going to
3 deal with the concept of the eco-system, the hydrologic
4 cycle, nutrient cycles and assessment of significance
5 of change.

6 Am I correct in my assessment that those
7 are the parts that you are going to be dealing with in
8 the examination-in-chief?

9 MR. FREIDIN: I will be dealing with the
10 other matters but not in a great amount of detail. For
11 instance, I note from the -- Forests for Tomorrow want
12 to cross-examine on forest dynamics and forest
13 resiliency, the two topics which precede the concept of
14 eco-system.

15 Ms. Swenarchuk was good enough to
16 indicate that she didn't require any elaboration on
17 those particular matters, but I think we will be
18 reluctant not to lead at least a small amount of
19 evidence on those particular matters.

20 THE CHAIRMAN: Well, just hold on. Let's
21 canvass that submission.

22 If the party who is interested or a party
23 who is interested in those issues had clearly indicated
24 that they feel there is an enough in the written
25 material, they didn't require any further elaboration

1 but still want to question the witness on it, why would
2 you have to put in more evidence?

3 MR. FREIDIN: Well, with the greatest of
4 respect for those counsel who say that, Mr. Chairman, I
5 guess I might respond in certain situations that it may
6 not be sufficient information, that it really needs
7 some sort of elaboration and it may need some
8 elaboration from the proponent's point of view, quite
9 apart from whether counsel believe that they have got
10 enough information.

11 So all I can do - and I am sort of saying
12 here -- you know, I'm sort of putting up my hands and
13 saying trust me, I am not going to take any longer than
14 I have to.

15 THE CHAIRMAN: Okay. Well, let's leave
16 it at that. Obviously in areas where counsel for the
17 parties have indicated they really don't require
18 further elaboration, then you will endeavour to keep it
19 to a minimum in those areas.

20 MR. CASSIDY: If I can just finish my
21 comments.

22 Subject to what I have heard, the parts
23 of this evidence that my client is interested in are
24 covered in parts that I have listed and if Mr. Freidin
25 is going to go into the other parts that's fine. We

1 may have some cross-examination on the other parts, but
2 I am content with those portions being dealt with.

3 Thank you.

4 THE CHAIRMAN: Very well.

5 Mr. Williams?

6 MR. WILLIAMS: Mr. Chairman, as it is set
7 out in your statement of issues, we were trying to
8 relate the forest dynamics and resiliency that the
9 witness is alluding in his statement to issues that are
10 of more relevance and importance to our client and as
11 to the interaction in those areas with the non-timber
12 resources, the fish and wildlife resources, and I heard
13 Mr. Freidin say that it is certainly not evident -- it
14 is clear from the evidence that there is no reference
15 to those particular resources and Mr. Freidin has
16 reaffirmed that he won't be dealing with those
17 resources, I guess, as indicated from the questions we
18 raise. If not, why not?

19 THE CHAIRMAN: Well, not necessarily
20 dealing with these resources in this panel. I think
21 you are indicating, Mr. Freidin, that Mr. Armson won't
22 be dealing with the impacts on wildlife and things like
23 that certainly in this panel but, as I understood it,
24 some of these issues are going to be dealt with in
25 subsequent panels; are they not?

1 MR. FREIDIN: Most definitely. Every
2 panel in relation to activities has an expert on it
3 that deals specifically with potential effects of that
4 particular activity on, on the one hand, aquatic
5 environment; the other hand, wildlife.

6 THE CHAIRMAN: See Mr. Williams, what we
7 are trying to accomplish I think at this stage of the
8 game is we are trying to get past the generalization
9 into the specific activities where I think many of the
10 theories and the principles that we have already heard
11 in one form or another are going to be applied
12 specifically to specific activities and to specific
13 areas and to specific values, some of them being
14 non-timber values.

15 And I am not sure how productive it is to
16 sort of cruise around the principles again if, in fact,
17 we are going to get more detailed evidence from those
18 who are probably in a better position to deal with them
19 in later panels.

20 MR. WILLIAMS: I understand that, Mr.
21 Chairman, and certainly a subsequent panel will be
22 dealing very specifically with issues that are of
23 particular concern to us.

24 I guess, again coming back to this panel,
25 we are dealing with some new issues here. The

1 hydrologic and nutrient cycles. We are not convinced
2 that there can't and isn't in fact some
3 interrelationship with those -- well-being of those
4 other resources and yet there is no indication whatever
5 in the evidence that there is any interconnection
6 whatsoever which leaves us somewhat mystified and I
7 guess that's why we felt that something -- either there
8 is a linkage there in some areas or there isn't and we
9 want to be satisfied, if they are not talking about
10 those other resources because there is absolutely no
11 connection or linkage, that is our major concern.

12 THE CHAIRMAN: Well, it may be.

13 MR. WILLIAMS: Well, knowing we will be
14 dealing with others in a very specific way in Panel 10,
15 fish and wildlife resource, surely these two types of
16 cycles have some interaction to the well-being of the
17 resource.

18 THE CHAIRMAN: Mr. Freidin, if there is a
19 linkage, will you be dealing with it in subsequent
20 panels or did you intend to deal with it in this panel?

21 MR. FREIDIN: Well, let me just take them
22 one at a time. I don't intend to deal with the
23 linkages between, for instance, the hydrologic cycle or
24 the nutrient cycle and potential effects on the aquatic
25 environment.

1 If one looks at the information -- well,
2 if you look at Panel No. 10, Dr. Allen is going to in
3 fact speak about those matters. He speaks of the
4 potential effects of increased ground flow -- I mean
5 the ground water flow or the increased potential of
6 sedimentation or there will be evidence about nutrients
7 entering the aquatic system and what effects they may
8 have. There is the link.

9 Mr. Armson is going to take -- for
10 instance, in relation to the aquatic environment, he
11 will take those two cycles in terms of the aquatic
12 environment down to where it gets right to the edge of
13 the water. He will talk about how nutrients may leave
14 a particular site and move off the site either -- we
15 are talking nutrients or the hydrologic cycle.

16 And then Dr. Allen is going to pick up on
17 that in Panel No. 10 and say: Okay, now, if that stuff
18 gets into the water here are what the potential effects
19 are and here is what the Ministry is doing about
20 minimizing or preventing that.

21 So I think the linkages will be there.

22 THE CHAIRMAN: Well, Mr. Williams, that
23 appears, I think, to answer your query as to where the
24 linkages will be addressed.

25 MR. WILLIAMS: Well, so it would seem,

1 Mr. Chairman. I guess we just have to wait for the
2 evidence to come forward and based on that it may be
3 determined to be satisfactory at that point to take
4 that form, but some questions may need to be asked
5 based on Mr. Armson's evidence.

6 MR. FREIDIN: If I can just make a
7 comment. I think there are probably a whole host of
8 relevant questions that Mr. Williams may want to ask in
9 Panel 9 which would lay the groundwork for
10 cross-examination in No. 10. I think perhaps that is
11 part of what Mr. Campbell is getting at.

12 So I think there will be enough scope for
13 Mr. Williams to cover off most of his concerns.

14 THE CHAIRMAN: Okay. I think the Board
15 would just ask counsel - I think we can end this
16 relatively quickly - and just ask counsel to bear in
17 mind that if they are asking a question of the
18 witnesses in Panel 9, where there is a clear indication
19 that it is going to be dealt with subsequently, where
20 the witness comes back and says:

21 No, I am not going to deal with that, and
22 Mr. Freidin gives an undertaking or the witness does
23 that it is going to be dealt with specifically by
24 another witness further on, I think we should leave it
25 at that point rather than belabour it in this panel

1 when it is going to be dealt with specifically.

2 Again, where we can avoid repetition, I
3 think it will speed up the proceedings in general. I
4 do not think anybody will be prejudiced at all if, in
5 fact, your queries are going to be answered by
6 witnesses in later panels.

7 So I think, bearing that in mind, we can
8 at least proceed with Panel 9 in the manner which we
9 have indicated and; that is, dealing with these few
10 topics and allowing the parties to cross-examine on
11 those topics to the point where they are satisfied that
12 their questions are either answered or will be answered
13 at some future time or, I guess alternatively, won't be
14 answered at all, in which case you have another course
15 of action to take when your side of the case is
16 reached.

17 Any other comments with respect to some
18 of the issues in connection with Panel 9?

19 (No response)

20 I think we will be spending, ladies and
21 gentlemen, a little more time in trying to scope Panel
22 10 because it is much more voluminous in terms of
23 length, there is more issues involved and we are
24 dealing I think for the first time with a specific
25 activity that parties obviously will be concerned about

1 regardless of which side of the spectrum they sit on.

2 Very well, we will...

3 MR. FREIDIN: Is that it?

4 THE CHAIRMAN: Yes. Well, that is it for
5 the scoping. Go ahead.

6 MR. FREIDIN: Two more matters.

7 Hopefully tomorrow we will be able to serve all of the
8 parties and provide the Board with a copy of all of the
9 answers to all of the undertakings which have been
10 given since day one.

11 One of the undertakings which was given
12 in Panel No. 4 was an undertaking to go back in time
13 and try and find out or find out something about the
14 history of the proposed clear cut policy of the
15 Ministry of Natural Resources. You recall that Mr.
16 Armson spoke about that, he indicated -- I think the
17 evidence is there is a 1976 draft of that and Mr.
18 Armson said that it was never implemented, it was never
19 adopted or approved, I think were his words, by the
20 Ministry of Natural Resources, and there was reference
21 to Mr. Flowers I believe who had written some material.

22 We have gone back and we have pulled
23 together that material. There is going to be a two- or
24 three-page covering explanation of that material and we
25 are also filing as part of our answer to that

1 undertaking a three- or four-page response from Mr.
2 Armson and Mr. Armson will be appearing in Panel No. 9
3 and will not be appearing thereafter for some
4 considerable length of time and what I would like to
5 propose is that we provide that material to the parties
6 tomorrow.

7 And I understand that -- including all
8 the backup material which, at the present time, is only
9 going to the Forests for Tomorrow because they asked
10 the undertaking, and that if people wish to
11 cross-examine on that material, that they do so perhaps
12 at the end of Panel No. 9 while Mr. Armson is still
13 around. So I think...

14 THE CHAIRMAN: That seems reasonable,
15 because I think parties at the time reserved their
16 right.

17 Should answers to interrogatories provide
18 a basis for further cross-examination, it seems silly
19 to have to recall witnesses when they are already
20 appearing in the normal course of a subsequent panel,
21 so perhaps we can just slot a time in at the end of
22 this panel for any cross-examination on this particular
23 issue.

24 You are just dealing with this one
25 undertaking?

1 MR. FREIDIN: That's correct.

2 THE CHAIRMAN: Okay.

3 MR. CASSIDY: On that point, Mr.

4 Chairman, is the background material going to be
5 provided to all parties or just the explanation by Mr.
6 Armson?

7 MR. FREIDIN: No, the background material
8 will be provided to everybody. You will get everything
9 that Forests for Tomorrow gets.

10 MR. CASSIDY: Thank you.

11 MR. FREIDIN: And I don't believe that
12 perhaps it has all been run off to do that tomorrow
13 morning, but hopefully by the end of the day you will
14 get the full package. Everyone, but Forests for
15 Tomorrow, will get part of the package tomorrow morning
16 but you will get the rest of it hopefully by the end of
17 the day.

18 THE CHAIRMAN: And presumably you will be
19 responding to that issue some time late Monday or
20 Tuesday of next week, that would be about the end of
21 this panel, based on the earlier forecasts; is that not
22 correct?

23 MR. FREIDIN: No, I wasn't planning to
24 deal with it at the end of this panel, at the end of
25 Panel No. 9.

1 THE CHAIRMAN: That's right, I am sorry.
2 That's right.

3 MR. FREIDIN: So it won't be for probably
4 another two weeks.

5 THE CHAIRMAN: That's right.

6 MR. FREDIN: Now, some counsel may have
7 difficulty responding to my suggestion without seeing
8 the material, but that is how I propose to deal with it
9 and it may be that other people will want to make
10 comments now, maybe tomorrow, I don't know.

11 THE CHAIRMAN: Mr. Campbell?

12 MR. CAMPBELL: Well, I think it is
13 necessary to see the material. The only reason I rise,
14 Mr. Chairman, I notice Ms. Swenarchuk is not here this
15 evening and it may be that, having seen the material,
16 it being her undertaking, she may want to make
17 submissions on timing as well. I just note that for
18 the record. She may need advice in the matter and...

19 THE CHAIRMAN: All right, Mr. Freidin,
20 why don't you do this: Why don't you speak with Ms.
21 Swenarchuk in the morning, or whenever you next see
22 her, indicate to her the proposal you made to the
23 Board, indicate that it is acceptable to the Board to
24 deal with it at the end of Panel 9 while Mr. Armson is
25 still here, and if she wants to object to that proposal

1 then she can bring it to the attention of the Board
2 tomorrow.

3 MR. FREIDIN: And one last matter, Panel
4 No. 10. I think we are probably going to get into next
5 week with this panel, based on the assessment of
6 cross-examination time.

7 I indicated at the last scoping session
8 that there was a chance if we, you know, finished a
9 couple of days early that we would try to fit in part
10 of Panel No. 10. I don't think we are going to be able
11 to do that anyway, but I would just like some direction
12 from the Board that that will not be the case, that we
13 will not have to start with part of Panel 10 before Mr.
14 Armson gives his evidence and that I can tell those
15 people in 10 that they can -- they are free to make
16 other arrangements.

17 Mr. Armson will be here Wednesday
18 morning. I am advised by noon on Wednesday.

19 THE CHAIRMAN: Well, based on the
20 estimates given today by counsel for cross-examinations
21 on Panel 8, it does not look to the Board like you are
22 going to finish before Tuesday at the earliest of next
23 week and, therefore, with Mr. Armson being unavailable
24 until Wednesday, I doubt very much if we are really
25 going to get in to an opportunity to start 10 on

1 Tuesday and then have to split it and go back to 9 on
2 Wednesday, it wouldn't make much sense.

3 Secondly, we want to hold the scoping
4 session for 10 on Thursday morning of this week and
5 that in itself may eat up a few hours there which will
6 perhaps put you into Tuesday to finish off Panel 8 in
7 any event.

8 MR. FREIDIN: I am very happy not to
9 start Panel 10 before Mr. Armson, so that is fine.

10 THE CHAIRMAN: I think we will proceed on
11 the basis that we won't be starting Panel 10 before we
12 take Panel 9 in order.

13 MR. FREIDIN: Okay, thank you.

14 THE CHAIRMAN: Thank you, ladies and
15 gentlemen.

16 We will adjourn until tomorrow at 9:30.

17 ---Whereupon the hearing adjourned at 7:35 p.m., to be
18 reconvened on Tuesday, January 31st, 1989,
commencing at 9:30 a.m.

19

20

21

22

23

(Copyright, 1985)

24

25

